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Review of the Scaphidiidae (Coleoptera) of Thailand

by

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With 181 figures

ABSTRACT

Review of the Scaphidiidae (Coleoptera) of Thailand. — The review is based on all available material from Thailand: 135 species in 12 genera are recognized. Following species are described as new: *Cyparium siamense, Pseudobironium subglabrum, Baeocera bremeri, B. pyricola, B. schwendingeri, B. uncata, B. schreyeri, B. vidua, B. pseudinculta, B. suthepensis, B. erroris, B. karen, B. deharvengi, B. insolita, B. barbara, B. pubiventris, B. innocua, Scaphisoma vagans, S. invisum, S. gracilendum, S. lepidum, S. mirandum, S. agile, S. suthepense, S. fastum, S. canaliculatum, S. operosum, S. lannaense, S. velox, S. pseudamabile, S. segne, S. egenum, S. pressum, S. valens, S. dives, S. incurvum, S. favens, S. spissum, S. meracum, S. siamense, S. bispinosum, S. cuspidatum, S. khao, S. morosum, S. karen, Baeotoxidium siamense, Scaphobaeocera laevis, S. alticola, S. maculata, S. incisa, S. tenella, S. spira, S. uncata, S. obducta, S. sabapensis, S. robustula, S. valida, S. burckhardti, Toxidium pubistylis, T. styligerum, T. incompletum, Scaphoxium avidum, Bironium troglophilum, B. bidens. Baeocera decipiens* Löbl is relegated to synonymy of *B. pigra* and *Baeocera robertiana* nom. nov. is proposed to replace *B. roberti* Löbl, 1986. Key to genera, and keys to Thai species of *Pseudobironium, Baeocera, Scaphisoma, Scaphobaeocera, Toxidium,* and *Scaphoxium* are given. *Scaphidium* and *Cyparium* are under-represented in studied material which possibly includes 50% of the species actually occurring in Thailand.

INTRODUCTION

Scaphidiids are fungivorous, usually very lively staphylinoid beetles. The adults which are exclusively studied here, are characterized by a large 1st ventrite (3rd abdominal

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sternite) and truncate elytra, which leaves the apex of the abdomen uncovered. Family rank is usually given to the group, although some modern authors give it subfamily status within the Staphylinidae (KASULE 1966, LAWRENCE 1982). The traditional treatment is preferred here until the phylogeny of staphylinids and related groups is better understood.

Some years ago I desired to revise the Oriental scaphidiids, but it became obvious that the material housed in collections was insufficient. Even on my first trip to tropical Asia, in 1970 to Sri Lanka — at that time still Ceylon — I noticed that scaphidiids were more diverse than expected. Experience from subsequent trips convinced me that it is best to work up material from areas in which a fairly high proportion of species has been collected or is available for study. Although this approach has some disadvantages, it does provide useful information on local faunas whose special features might be more easily noted. In addition, gaps in knowledge will be relatively smaller, thus enabling keys to work more reliably.

Scaphidiids, along with other small beetles, have not yet been adequately collected in most of warm temperate and tropical Asia. Thailand together with Laos, Cambodia and China are countries particularly neglected in this respect. In 1985, the National Research Council of Thailand approved my project to review the Thai scaphidiids, and in the same year I undertook a collection expedition together with my colleague Daniel H. Burckhardt. The bulk of the material treated in the present study was gathered on that expedition. However, some additional material from other sources substancially helped to complete the data.

TECHNIQUES

Material. We carried out field work in seven areas in Northwestern, Western, Central, and Eastern Thailand (Fig. 1). Altogether we spent 25 days in the field, excluding travelling time. The sampling was negatively affected by the climate: we suffered from havy rainfall which stopped us at Sop Pong, whilst Kaeng Krachan and Khao Sabap National Park were drought-stricken. Most of the material comes from sifted samples of forest litter and from fresh fungi growing on dead wood. Specimens were extracted in "Winkler/Moczarski" extractors (BESUCHET *et al.*, 1987). The main additional sources of material were pitfall traps. Many specimens were also found singly on fungi. Specimens were collected and conserved in 70% alcohol/10% acetic acid. Most males (all males in many groups) were dissected, the aedeagi cleared and mounted in Canada balsam. Dry material was dissected after relaxing in water or diluted ammonium hydroxide (NH_4OH).

Available material totaled more than 1800 specimens in 135 species. This may represent some 50% of the species actually occurring in Thailand. In this respect scaphidiids compare with Steninae (ROUGEMONT, 1983).

Bionomics. No attempt has been made to observe the life history of any species during the short time spent in Thailand. Although less abundant than paederines or pselaphids, scaphidiids constitute a significant component of the forest litter community. The presumably myxomycetophagous *Baeocera, Scaphobaeocera, Scaphoxium* and many *Scaphisoma* have been found regularly in moist accumulations of debris in shady places, especially in ravines, depressions, along fallen trunks, at foot of large trees etc... These beetles occur also in sites regularly devastated by fire. *Scaphidium, Cyparium,* and many *Scaphisoma* feed on fresh fungi growing on dead wood. They are difficult to find if climatic conditions are unfavourable, and they are generally collected more or less incidentally. Therefore, this group is under-represented in the studied material.

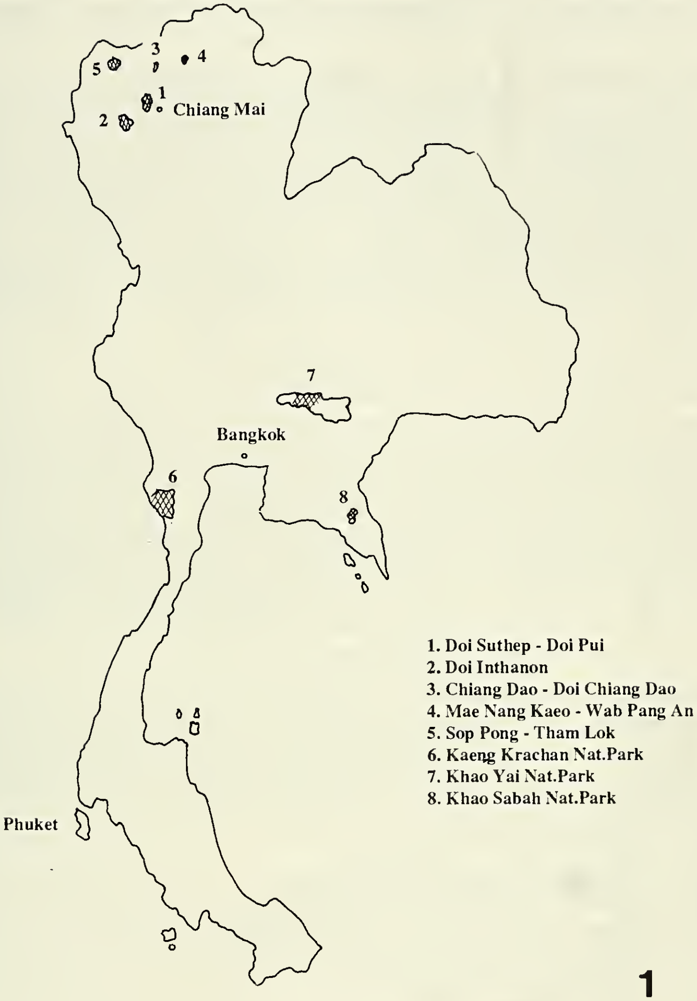

FIG. 1.

Map of Thailand. Main collecting sides numbered.

Distribution records. The name of the province precedes the first respective locality record, except for the Khao Yai National Park which covers portions of several provinces. It was difficult to locate some remote collecting spots in the primery forest of the Park. However, most specimens were taken only a few kilometers away from the Headquarters of the Park. Only Thai specimens are treated in this paper, with the exception of the holotype and one paratype of *Scaphisoma operosum* from Malaysia, two paratypes of *Scaphisoma morosum* and one specimen of *Scaphicoma arcuatum* from Burma, and one paratype of *Scaphobaeocera tenella* from India. Locality data of a few incompletelylabelled, older specimens are given in inverted commas. Names of collectors are given in parenthesis, except for D. H. Burckhardt and the author, collectors of the remaining specimens.

Diagnostic characters. As in my previous papers, the length of specimens is measured from the middle of the apical pronotal margin to the inner apical angle of the elytra. However, in *Scaphidium* and *Cyparium* the total length is given. Size of immature specimens (usually smaller) has not been taken in account. Width refers to the maximum body width. Length of the mesepimeron and width of the metepisternum refer to their respective exposed portions. Apical angles of the elytra are compared in dorsal view. Colour is described from specimens which are observed with artificial light, and is thus paler than under natural conditions (dark reddish would be black). The relative length of antennal segments III to XI is measured at the same magnification in all my papers since 1974. Although to a certain degree infraspecifically variable, the size of the segments provides good characters in some species. The same is true for the size of the metacoxal areas (plates in my previous papers). Precise identification requires in most groups examination of the male genitalia. The internal sac is often complex and the parameres bear membranous lobes. These structures are difficult to see unless the aedeagus is properly cleared and carefully mounted. Students should be aware that different parts of the genitalia may vary to some degree, and in addition, the shape and position of structures within the internal sac depend on muscles attaching the latter to the median lobe. Therefore the aedeagi are to be examined very carefully, and when compared with the figures, small differences should not be uncritically interpreted as specific. Keys to species are based on external characters whenever possible, often on colour pattern. Naturally, they cannot be used for identification of immature specimens.

Other material. I have examined the type material of all previously described species which are included here. Only papers pertaining to the treated species and their synonymy are cited. For synonymy of genera and their type species, see Löbl 1978, 1979*a* and 1981*b*. Institutions in which material is deposited are listed below, together with the abbreviations used in the text.

BMH	B. Bishop Museum, Honolulu
FMNH	Field Museum Natural history, Chicago
MHNG	Muséum d'Histoire naturelle, Genève
MHNP	Muséum National d'Histoire naturelle, Paris
SMNS	Staatliches Museum für Naturkunde, Stuttgart
NHB	Naturhistorisches Museum, Basel
ZML	Zoological Museum, Lund

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SYSTEMATICS

ACHARD (1924) published a classification of the Scaphidiidae in which he recognized seven tribes, and in some of them several subtribes. Although many of the characters used prove to be of no phylogenetic significance (i.e. approximate coxae in "Toxidiini", shape of the antennae in "Cerambyciscaphini") a more natural classification of the group has yet to be proposed. Therefore, I prefer not to use suprageneric names within the scaphidiids. The treatment of genera in the present paper, as in my previous studies, does, however, reflect the traditional system.

KEY TO THAI GENERA OF SCAPHIDIIDAE

(Genera in parenthesis are not recorded but may occur in Thailand).

1 Segments of antennal club symmetrical. Scutellum large. Robust species ... 2
— Segments VII to X, sometimes also other antennal segments, asymmetrical. Scutellum completely covered, or its small apical portion exposed. Usually small, graceful, species ... 4
2 Eye not notched. Pro- and mesotibiae bearing rows of spines. Pronotum lacking transverse row of punctures ... *Cyparium*
— Eye notched. Tibiae lacking row of spines. Pronotum with a sub-basal row of coarse punctures ... 3
3 Base of elytron impressed to receive basal angle of pronotum. Elytra without longitudinal striae ... *Scaphidium*
— Base of elytron not impressed; basal pronotal angles not extended apically. Elytra with deep longitudinal stria ... *(Ascaphium)*
4 Third antennal segment short, asymmetrically triangular. First ventrite with coxal areas ... 5
— Third antennal segment elongate, cylindrical or somewhat stouter apically, usually symmetrical, not triangular. Coxal area absent from first ventrite .. 8
5 Body, except for isolated macrosetae, apparently glabrous. Pubescence on pronotum and elytra extremely short, usually not emerging from points ... 6
— Dorsal and ventral surface of body and legs conspicuously pubescent ... 7
6 Apical segment of maxillary palpus about as wide as preceding and tapering ... *Scaphisoma*

— Apical segment of maxillary palpus enlarged and flattened, with a groove on external margin .... *(Caryoscapha)*

7 Mesepimeron distinct .... *Sapitia*

— Mesepimeron obsolete .... *(Mystrix)*

8 Meso- and metacoxae distant. Body not conspicuously narrowed 9

— Meso- and metacoxae approximate. Body conspicuously narrow 12

9 Antennal insertion lying near upper eye margin. Legs and antennae very long .... *Bironium*

— Antennal insertion lying near lower eye margin, close to frontoclypeal suture. Legs and antennae not so long 10

10 Mesepimeron distinct. Basal angle of pronotum extending ventroapically to near anterior margin of metepisternum .... *Baeocera*

— Mesepimeron obsolete. Basal angle of pronotum not extended apically, removed from anterior margin of metepisternum 11

11 Antennal segments VII to XI elongate, XI somewhat longer than X .... *Pseudobironium*

— Antennal segments VII to X about as long as wide, XI elongate, about as long as VIII, IX and X together .... *(Amaloceromorpha)*

12 Mesepimeron distinct 13

— Mesepimeron obsolete 14

13 Elytron with parasutural stria, usually microsculptured and iridescent .... *Scaphobaeocera*

— Elytron without parasutural stria, lacking microsculpture, not iridescent .... *Baeotoxidium*

14 Third antennal segment curved externally. Antennal insertions near frontoclypeal suture .... *Scaphoxium*

— Third antennal segment straight, antennal insertion removed from frontoclypeal suture 15

15 Legs and antennae moderately long. Antennae reaching only somewhat behind level of elytral base. Tarsi not or moderately longer than metatibiae. Sutural stria of elytron usually shortened anteriorly .... *Toxidium*

— Legs and antennae very long. Antennae reaching far behind level of elytral base. Metatarsi much longer than metatibiae. Elytron with sutural stria reaching base .... *Scaphicoma*

Scaphidium Olivier

Most of the larger scaphidiids are assigned to *Scaphidium* which includes more than 200 species. As the related genera of Scaphidiini, *Scaphidium* is not well defined, and most of the tropical species have not yet been adequately characterized.

Scaphidium lunatum Motschulsky

Scaphidium lunatum Motschulsky, 1859: 94.
Scaphidium lunulatum (sic); PIC 1921*a*: 158.
Scaphidiolum lunatum; ACHARD 1924*b*: 91.

Material examined: 2, Chiang Mai, Chiang Dao, 450 m, 5.-11.IV.58 (Maa) (MHNG, BMH).

Distribution: Burma, Thailand. — New to Thailand.

Remarks. The origin of the type from "Ind. or." is not known.

Scaphidium grande Gestro

Scaphidium grande Gestro, 1880: 50.
Scaphidium grande; Achard 1920*a*: 56; 1920*b*: 125; 1920*d*: 211; 1924*b*: 91.
Scaphidium grande; Pic 1915*c*: 3; 1920*a*: 189.

Material examined: 1, Chiang Mai, Doi Pui, 15.VI.85 (NMB).

Distribution: North India, Burma, Thailand, Laos, Malaysia, Vietnam, Indonesia, Taiwan. — New to Thailand.

Scaphidium species A

Material examined: 1, Chiang Mai, Chiang Dao, Tham Ban Doi, Phae Daeng, 3.VIII.85 (FSE); 2, Phuket, hills near Surin Beach, 1.-6.XI.87 (Heiss).

Remarks. This species resembles *biseriatum* Champion but is stouter and has coarser punctate elytra.

Scaphidium baconi Pic

Scaphidium baconi Pic, 1915*d*: 43.
Scaphidium assamense Pic, 1915*d*: 43.
Scaphidium baconi; Achard 1922: 263.

Material examined: 1, Chiang Mai, Doi Suthep, 1100 m, IV.86, pit-fall trap (Schwendinger) (MHNG).

Distribution: India, Thailand. — New to Thailand.

Scaphidium sp. B

Material examined: 1, Chiang Mai, Chiang Dao, 450 m, 5.-11.IV.58 (Maa) (BMH).

Remarks. This female specimen is very similar to a syntype of *sondaicum* Gestro I have examined but differs in having coarser microsculpture on the ventrites 2 to 5.

Cyparium Erichson

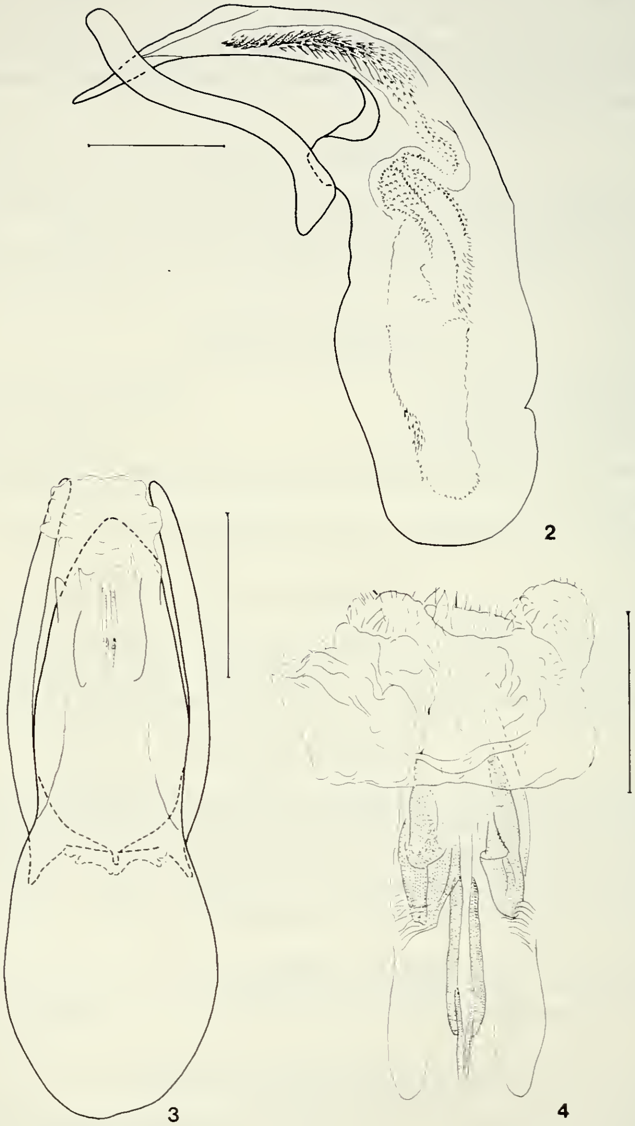
Cyparium may be readily distinguished from other scaphidiids by their compact antennal club, not notched eyes, stout body, and spinose pro- and mesotibiae. Members of the genus are frequently found in the tropics and subtropics of the New World while Old World species are poorly represented in collections, *mikado* Achard from Japan excepted. So far 44 species were described, two are represented in the Thai collections.

Cyparium siamense sp. n.

Holotype ♂: Khao Yai Nat. Park, forest near Headquarters, 750-850 m, 26.XI.-3.XII.85 (MHNG).

Paratypes: 1♂, Chiang Mai, Doi Angkhang, 10 km W Fang, 920 m, 18.III.87 (Schwendinger); 1♀, Doi Suthep, 1200 m, 15.I.87 (Schwendinger) (MHNG).

Length 3.2-3.4 mm (2.4-2.5 mm from apical margin of pronotum to apex of elytra), pronotum 1.5 mm wide at base, elytra combined 1.7-1.8 mm wide. In general appearence very similar to *tamil* Löbl from which it differs in following characters: body smaller and paler reddish brown. Frons narrower, smallest interval between eyes 0.15-0.17 mm. Lateral margin of pronotum sinuate near base, lateral margin keel distinct in basal half (dorsal view). Scutellum shorter, its exposed portion at base wider than long. Lateral



FIGS 2 to 4.

2. *Cyparium siamense* sp. n., holotype, aedeagus; 3. *Pseudobironium subglabrum* sp. n., holotype, aedeagus; 4. dtto, internal sac. Scale = 0.2 mm (2, 3), 0.1 mm (4).

margin keel not visible at wider than long. Lateral margin keel in dorsal view not visible at largest point of elytron. Elytral punctation less coarse, sutural margin of elytron and sutural stria flat and impressed. Punctation on visible tergites coarser, especially medially, that on pygidium coarser than on propygidium. Metasternum with two deep longitudinal impressions just in front of apical intercoxal process, latter somewhat convex in mid-line. Punctation on lateral portion of 1st visible ventrite irregular and sparse.

Sexual characters of male. Segments 1 to 3 of protarsi distinctly enlarged. Aedeagus (fig. 2) 0.95 mm long.

Remarks. Only 15 species of *Cyparium* are recorded from Asia. Among them *montanum* Achard, *plagipenne* Achard, *variegatum* Achard, *bowringi* Achard and *tenenbaumi* Pic are characterized by the colour pattern. *C. mikado* Achard, *sibiricum* Solsky, *laevisternale* Nakane as well as *tenenbaumi* differ from *siamense* by much larger size of body, *khasianum* Löbl may be separated by coarsely punctate lateral portion of metasternum and microsculptured hypomeron, *semirufum* Pic, *testaceum* Pic and *punctatum* Pic differ from *siamense,* as well as from *tamil* and *khasianum,* in havin 6 or 7 rows of coarse punctures on each elytron. Finally, *monticola* Miwa & Mitono and *formosanum* Miwa & Mitono are not adequately described and their respectives types have not been located. According to the original figure of *formosanum* I would gues rather a *Pseudobironium* under this name, althought some of the characters noted in the description (elytron with four rows of punctures, large size) are those of *Cyparium. C. monticola* is not figured but its description suggest rather a *Pseudobironium* or a large species of the genus *Baeocera.*

Cyparium semirufum Pic

Cyparium semirufum Pic, 1917: 3.

Material examined: 1, Chiang Mai, Chiang Dao, 450 m, 5.-11.IV.58, on dead tree (Maa) (BMH).

Distribution: Vietnam, Thailand. — New to Thailand.

Remarks. This specimen differs slightly from examined *semirufum* from Vietnam by somewhat coarser punctation on 1st ventrite, propygidium und pygidium. The species may be readily distinguished from *siamense* by large size (length 3 mm from apical margin of pronotum to apex of elytra, maximum width 2.0-2.2 mm), paler rufous colour of body, elytron with 6 rows of coarse punctures, and metasternum without any impression.

Pseudobironium Pic

The genus includes 21 described species all Oriental or East Palearctic and *globosum* Löbl from New Caledonia. *Pseudobironium* are moderately large to large scaphidiids with broad, not keeled mesosternum, not visible mesepimera, alongate 3rd antennal segment, complete suturo-basal stria of elytron, stout tibiae, and 1st ventrite without coxal areas. Their body is less vaulted than in most other scaphidiids of similar size and, with exception of a few species with particular colour pattern, they are difficult to distinguish. The four species found in Thailand may be separated by the following key.

1 Body unicolorous reddish to black 2
— Pronotum and elytra maculate . . . . species indet b.
2 Maxillary palpus slender, with apical segment more than 3 × longer than wide 3
— Maxillary palpus short and stout, apical segment less than 2 × longer than wide . . . . *sparsepunctatum*

3 Larger species about 3.5 mm long. Body rufous. Antennae long, with apical segment more than 3× longer than wide .... *carinense*

— Small species 2.2 mm long. Body blackish. Antennae shorter, with apical segment 2× longer than wide .... *subglabrum*

Pseudobironium carinense (Achard)

Morphoscapha carinense Achard, 1920*b*: 134.

Material examined: 2, Chiang Mai, Doi Chiang Dao, 1060 m, 17.VII.86 (Schwendinger); Doi Chiang Dao, 450 m, 5.-11.IV.58 (Maa) (MHNG, BMH).

Distribution: Burma, Thailand. — New to Thailand.

Remarks. *P. castaneum* Pic described from Vietnam is very similar and possibly synonym with *carinense.*

Pseudobironium sparsepunctatum (Pic)

Amalocera sparsepunctata Pic, 1915*b*: 31.
Morphoscapa banguyi Achard, 1920*b*: 134.
Pseudobironium sparsepunctatum; Löbl 1982*d*: 790.

Material examined: 1, Mae Hong Sop Pong, 600-700 m, 12.XI.85 (MHNG); 1, Songkhla (W), Watterfall 2 km SE Satun Rd., 16.I.64 (Samuelson) (BMH).

Distribution: Thailand, Malaysia (Sarawak, Sabah inc. Banggi), Philippines (Palawan). — New to Thailand.

Pseudobironium species

Pseudobironium species indet. b.; Löbl 1982*a*: 160.
Pseudobironium; Löbl 1984*a*: 62.

Remarks. So far 3 ♀ are recorded from Meghalaya and from Doi Pui, Chiang Mai prov. The species is left undescribed until males will be available for examination.

Pseudobironium subglabrum sp. n.

Holotype ♂: Chiang Mai, Doi Inthanon, 1650 m, 17.XI.85 (MHNG).

Length 2.2 mm. Body moderately convex, almost black. Apical segments of abdomen, tibiae and tarsi reddish. Antennal segments I to VI yellowish, following segments pale brown. Apical segment of maxillary palpus slender, about 3,5× longer than broad, at base slender than apex of segment III. Antennae moderately long, relative length/width of segments: III 16/7, IV 25/6, V 29/7, VI 20/7, VII 30/10, VIII 27/10, IX 29/12, X 27/13, XI 34/17. Pronotum at base 1.45 mm wide, with basal third of lateral margin oblique and lateral carina visible in dorsal view. Pronotal punctation rather dense and very fine, barely visible at 12× magnification. Elytra combined 1.6 mm wide, contours oblique in middle portion; lateral carina visible from base to apex in dorsal view; interval between sutural margin and sutural stria flat, very finely punctate; sutural stria shallow, finely punctate; basal stria impunctate; lateral and epipleural striae punctate; discal punctuation sparse and very fine, on most of the elytral surface only somewhat coarser than that on pronotum, decidedly denser and coarser on a narrow impressed apical area and on a small flattened apico-lateral area. Punctation on pygidium very fine. Punctation of mesosternum dense and fine, that of mesepisternum and lateral portions of metasternum very sparse and extremely fine, barely visible at 100× magnification.

Median portion of metasternum rather flat, without microsculpture, its apical 1/4 (apical intercoxal process smooth) densely and rather coarsely punctate, with punctures as large or somewhat smaller than intervals; narrow median strip smooth in front of the densely punctate area. Punctation irregular and sparse on each side of the smooth strip. Mesocoxal areas 0.06 mm long, with coarsely punctate margins. Visible abdominal segments (including the laterobasal portion of 1st ventrite) with distinct microsculpture consisting of punctures. First ventrite very finely and sparsely punctate; lateral portions impunctate, on each side with a transverse impressed line and a small round impression. Protibiae straight, 0.46 mm long. Mesotibiae and metatibiae curved, 0.67 mm and 0.84 mm long respectively. Segments 2 to 5 of mesotarsi about 2.2× longer that segment 1; segments 2 to 5 of metatarsi about 1.8× longer than segment 1.

Male. Segments 1 to 3 of protarsi enlarged. Aedeagus (figs 3 and 4) 0.74 mm long.

This species is similar to *almoranum* Champion from which it may be easily distinguished by the finer punctation of the pronotum and elytra, shallower sutural striae of elytra, and broader apical portion of the median lobe of the aedeagus.

Baeocera Erichson

Baeocera are small-sized scaphidiids with 3rd antennal segment slender, maxillary galea narrow, coxal cavities not or moderately approximate, 1st ventrite coarsely punctate or ridged at base (lacking coxal lines), basal angles of pronotum usually covering anterior portion of metepisternum, mesepimeron distinct. Most of the Thai scaphidiids collected by sifting forest litter belong to this genus. Some 160 species have been described to date, 7 of which are recorded below, and further 15 are described as new.

KEY TO THE THAI SPECIES OF BAEOCERA

1 Lateral portion of metasternum impunctate or very finely punctate (100× magnification) (coarse punctures margining mesocoxal lines excepted) 2
— Lateral portion of metasternum all over coarsely punctate or with apical row of coarse punctures 7
2 Pygidium coarsely punctate and with keeled lateral margin .... *pubiventris*
— Pygidium finely very finely punctate, lateral margin not keeled 3
3 Sutural stria extended along basal margin of elytron to humeral area and joint with lateral stria .... *barbara*
— Sutural stria more or less extended along basal margin of elytron but not joint with lateral stria 4
4 Laterobasal portion of 1st ventrite ridgy. Basal third of elytron very finely punctate. Small species 1.1 mm long .... *bremeri*
— Base of 1st ventrite margined with coarse, more or less elongate punctures, not ridgy. Larger species 5
5 Pronotum and elytra all over evenly and very finely punctate .... *khasiana*
— Elytral centre much coarser punctate than base or than pronotum 6
6 Apical 2/5 of elytron much finer punctate than centre of elytron .... *innocua*
— Apical portion of elytron only somewhat finer punctate than centre of elytral disk .... *insolida*
7 Lateral portion of metasternum with dense row of coarse punctures along apical margin and few additional coarse punctures between anterior and apical margins 8

— Metasternum lacking distinct row of punctures along apical margin 9

8 Apical antennal segment barely longer than penultimate. Length 1.4 mm .... *schwendingeri*

— Apical antennal segment distinctly longer than penultimate. Length 1.45-1.60 mm .... *pyricola*

9 Pronotum conspicuously coarsely punctured (12× magnification). Hypomeron with several distinct punctures .... species indet.

— Pronotum usually very finely punctate (50-100×). Hypomeron impunctate .. 10

10 Most of elytral surface distinctly punctured. Apical portion of elytron not or only somewhat finer punctured than central part of elytron 11

— Punctation on apical 1/3 to 1/2 of elytron very fine, much finer than that on central area of elytron 17

11 Metatarsus short, as long or somewhat longer than half of metatibia. Length 1.70-2.25 mm .... *mussardi*

— Metatarsus long, as long as or somewhat longer than 4/5 of metatibia. Usually smaller species 12

12 Sutural and lateral striae more or less extended along basal margin of elytron and often joint 13

— Sutural stria short, obsolete near pronotal lobe, not curved and not extended along base of elytron .... *schreyeri*

13 Lateral portion of metasternum with few coarse punctures most of which are lying near metepisternum .... *uncata*

— Most of metasternal surface densely and more or less coarsely punctate 14

14 Metepisternum distinct, with deep, large, punctate suture .... *serendibensis*

— Metepisternum indistinct, with suture indicated by outer row of coarse metasternal punctures 15

15 Apical half of parameres of aedeagus narrowed .... *pigra*

— Parameres not narrowed apically 16

16 Parameres of aedeagus slender and straight. Internal sac with rows of sclerotized denticles along ejaculatory duct .... *vidua*

— Apical part of parameres more or less divergent. Internal sac without denticles, ejaculatory duct vesicular before entering into complex of sclerites .... *longicornis*

17 Sutural stria extended along base of elytron to humeral area, not joint with lateral stria 18

— Sutural stria extended along base to lateral area and joint with lateral stria . 20

18 Internal sac of aedeagus with a basal tuft of sclerotized spicules; parameres notched subapically 19

— Aedeagus without any spicules; parameres not notched .... *deharvengi*

19 Apical portion of parameres wide and short, interval between notch and apex about 0.05 mm long, 1.5 to 2× longer than wide at widest point (just behind notch) .... *franzi*

— Apical portion of parameres slender, interval between notch and apex 0.06-0.08 mm long, 3 to 4× longer than wide at widest point (just behind notch) .... *ventralis*

20 Parameres narrowed basally and apically of level of apex of median lobe, not enlarged at apex .... *suthepensis*

— Shape of the parameres different 21

21 Smaller species, usually less than 1.35 mm long. Parameres slender 22
— Larger species 1.35-1.50 mm long. Parameres of aedeagus large, especially in basal half .... *pseudinculta*
22 Parameres almost straight. Internal sac with a large vesica formed by enlarged ejaculatory duct .... *karen*
— Apical portion of parameres distinctly curved. Internal sac without vesicular ejaculatory duct .... *erroris*

Baeocera mussardi mussardi (Löbl)

Eubaeocera mussardi Löbl, 1971: 944.
Baeocera mussardi mussardi; Löbl 1979*a*: 89.

Material examined: 3, Phetchaburi, Kaeng Krachan Nat. Park, near Headquaters, 200 m, 16.XI.85 (MHNG); 2, Samutprakan, Pattaya, 28.II.79 (Palm) (ZML).

Distribution: Sri Lanka, Thailand. — New to Thailand.

Remarks. Surprisingly, no significant differences are found to separate the Thai specimens from the Ceylonese ones while specimens collected in India may be readily distinguished (Löbl 1979*a*).

Baeocera serendibensis (Löbl)

Eubaeocera serendibensis Löbl, 1971: 946.
Baeocera serendibensis; Löbl 1979*a*: 89; 1984*a*: 65.

Material examined: 8, Mae Hong Son, Tham Lok Forest Park, 8 km N Sop Pong, 700 m, 11. and 13.XI.85; 2, near Sop Pong, 600-700 m, 12.XI.85; 26, Phetchaburi, Kaeng Krachan Nat. Park, 200-450 m, 16.-19.XI.85; 1, Chantaburi, Khao Soi Dao, 300 m, 7.V.87 (Schwendinger) (all MHNG).

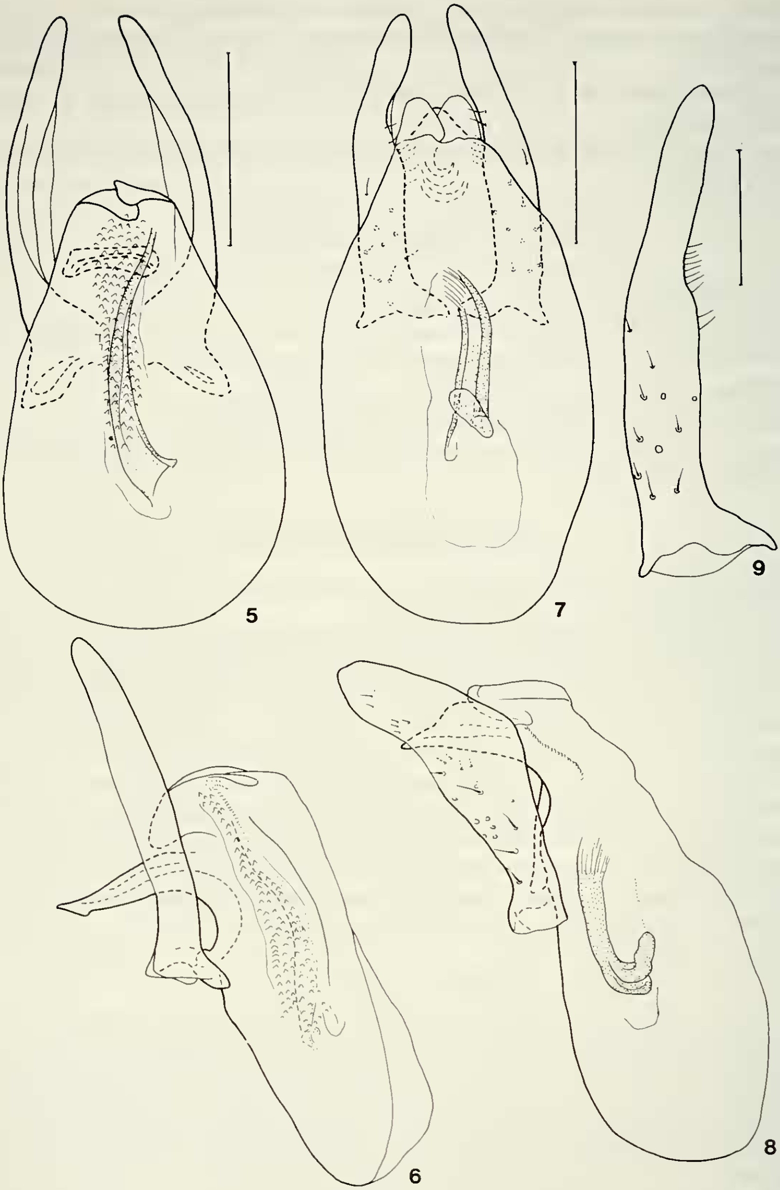
Distribution: Sri Lanka, India, Pakistan, Thailand. — New to Thailand.

Remarks. This is a variable and possibly polytypic species. In most of the Thai specimens the 1st ventrite is more or less coarsely punctate, the elytron is very finely punctate only on a large basal area, and the internal sac of the aedeagus bears two slender sclerites. Curiously, one male and two females from the Kaeng Krachan Nat. Park differ in having the elytra finely punctate apically, the 1st ventrite almost impunctate behind the basal row of the coarse elongate punctures, and in the male one of the sclerites of the internal sac is enlarged similar to some of the specimens from North India and Pakistan.

Baeocera bremeri sp. n.

Holotype ♂: Khon Kaen: Khon Kaen, 21.II.81, on light (Saowakontha) (MHNG).

Length 1.1 mm, width 0.76 mm. Body dark brown to blackish with reddish shine. Apex of elytra, abdomen, coxae, femora and tibiae ochreous, tarsi yellowish, antennal segments I-V ochreous, following segment brown. Eyes large. Antennae rather short, relative length of segments as: III 8, IV 9, V 11, VI 10, VII 15, VIII 13, IX 18, X 17, XI 23; segment III somewhat more than 2× longer than wide; IV 3× longer than wide, somewhat slender than III; V and VI barely wider than III, about 2.5× longer than wide; VII and VIII each about 2× longer than wide, much wider than VI; VIII to XI distinctly wider than VII, XI 2.5× longer than wide. Pronotal punctation sparse and very fine, indistinct at 25×; lateral margin keels of pronotum not visible in dorsal view. Scutellum completely covered by pronotal lobe. Elytra rather narrowed apically; lateral margin keel visible in middle portion but not near base or apex (dorsal view); sutural margin elevated; sutural stria fine, impunctate, curved along basal margin and extended to middle of basal



Figs 5 to 9.

5 and 6. *Baeocera bremeri* sp. n., holotype, aedeagus; 7 and 8. *Baeocera pyricola* sp. n., holotype, aedeagus; 9. dtto, paramere. Scale = 0.1 mm (5-8), and 0.05 mm (9).

width; interval between sutural margin and sutural stria flat, very finely punctate; lateral stria with a few very fine punctures; discal punctation very fine and sparse, similar as that on pronotum on whole basal third and on inner portion of elytral disk (up to apex); outer half of disk (basal third excepted) closely and relatively coarsely punctate, in middle of lateral portion punctures larger than intervals between them. Propygidium and basal portion of pygidium densely and rather finely punctate, apical portion of pygidium very finely punctate. Hypomeron smooth. Mesosternum impunctate, with a very low barely visible median keel. Mesepimeron about 2× longer than interval between its inner end and mesocoxa. Median portion of metasternum moderately vaulted, with rather large smooth central area limited laterally and apically by very dense, coarse setiferous punctures, latter larger than intervals between them. Lateral portion of metasternum rather densely and very finely punctate, on anterior half very finely ridgy. Mesocoxal area 0.06 mm long, subtriangular, with distinct marginal punctures. Metepisternum almost flat, 0.10 mm wide in almost parallel-sided apical half, from middle on anterad narrowed; suture deep, convexly rounded in anterior half, straight in apical half, distinctly punctured. Apical abdominal segments with microsculpture consisting of punctures. Abdominal pubescence short. Median portion of 1st ventrite densely and coarsely punctate, except on a very finely punctate area near apical margin. Lateral portion of 1st ventrite ridgy in basal half, with ridges up to 0.12 mm long and intervals between the ridges rather coarsely punctate. Tibiae straight, metatibia 0.33 mm, as long as metatarsus.

Sexual caracters of male. Segments 1 to 3 of protarsi distinctly enlarged. Aedeagus (figs 5 and 6) 0.31 mm long.

The aedeagus in *bremeri* is similar to that in *schirmeri* Reitter, *myrmidon* (Achard), *gerardi* (Pic) and *palmi* Löbl. The new species may be easily separated from the Mediterranean *schirmeri* and the Afro-tropical *gerardi* and *palmi* by the conspicuous elytral punctation and by the very finely punctate lateral portion of the metasternum. It differs from *myrmidon* by the longer ridges and by basal punctation on the 1st ventrite, and by the distal portion of the median lobe which is conspicuously bent.

Baeocera pyricola sp. n.

Holotype ♂: Mae Hong Son, Tham Lok Forest Park, 8 km N Sop Pong, 11 and 13.XI.85 (MHNG).

Paratypes: 2♀, Mae Hong Son, as holotype; 2♂, Chiang Mai, Doi Inthanon, 1250 m, near Forestry Department, 6.XI.85; 1♀, Khao Yai Nat. Park, near Headquarters, 750-850 m, 26.XI.-3.XII.85 (MHNG).

Length 1.45-1.60 mm, width 1.01-1.10 mm. Dark reddish brown to blackish, tarsi and antennae yellowish. Eyes large. Antennae long, relative length of antennomeres as: III 16, IV 19, V 24, VI 23, VII 25, VIII 22, IX 25, X 24, XI 34 (holotype); segments III to VI very slender, evenly wide; V and VI 6 to 7× longer than wide; VII and VIII slender, with long apical funicle, each 4-5× longer than wide, VIII somewhat wider than VI; IX to XI distinctly wider than VII, XI about 3.5× longer than wide. Pronotum with regularly rounded lateral margins; lateral keels not visible in dorsal view; punctation extremely fine, barely visible at 100× magnification. Basal angle of pronotum covering base of epipleuron, not extended behind level of middle of mesepimeron. Point of scutellum exposed. Elytra moderately narrowed apically; lateral margin almost straight in middle; lateral keel visible in dorsal view only near base; sutural margin not elevated; sutural stria rather fine, coarsely punctate, extended along base and joint with lateral stria; interval between sutural margin and sutural stria flat, rather coarsely punctate; lateral stria distinctly punctate; punctation dense and coarse all over except on a narrow laterobasal area which is as finely punctate as pronotum, coarse punctures not well delimited, usually larger then interval between them. Hypomeron impunctate. Pygidium very finely punctate, lacking marginal keel. Mesosternum not keeled, impunctate. Mesepimeron variable large, about as long as intervals between its inner end and mesocoxa. Median portion of metasternum vaulted; with large impunctate central area limited laterally by a row of coarse punctures, and apically limited by one or two irregular rows of coarse punctures. Lateral portion of metasternum with an impressed, coarsely punctate line parallel to apical margin, coarsely punctate anterior margin and several coarse punctures near lateral margin, remaining surface smooth. Mesocoxal area narrow, 0.02 mm long, with coarse marginal punctures. Metepisternum flat, at widest point 0.04-0.05 mm, gradually narrowed anteriorly, inner suture straight, deep, coarsely punctured, curved near mesepimeron. First ventrite coarsely and rather sparsely punctate, with most punctures decidedly smaller than intervals between them; basal row of punctures dense, not interrupted in middle, extended to lateral keel, consisting of coarse, not elongate punctures. Following ventrites very finely punctate, with microsculpture consisting of points. Abdominal pubescence normally long. Tibiae barely curved, metatibiae 0.48-0.55 mm long, about 1.2× longer than metatarsi.

Sexual characters of male. Segments 1 to 3 of protarsi somewhat enlarged. Aedeagus (Figs 7 to 9) long 0.35-0.40 mm.

This new species is closely related to *pilifera* Löbl (see discussion under *schwendingeri* sp. n.). It may be distinguished by the smaller size of the body and by the parameres of the aedeagus which are shallowly notched.

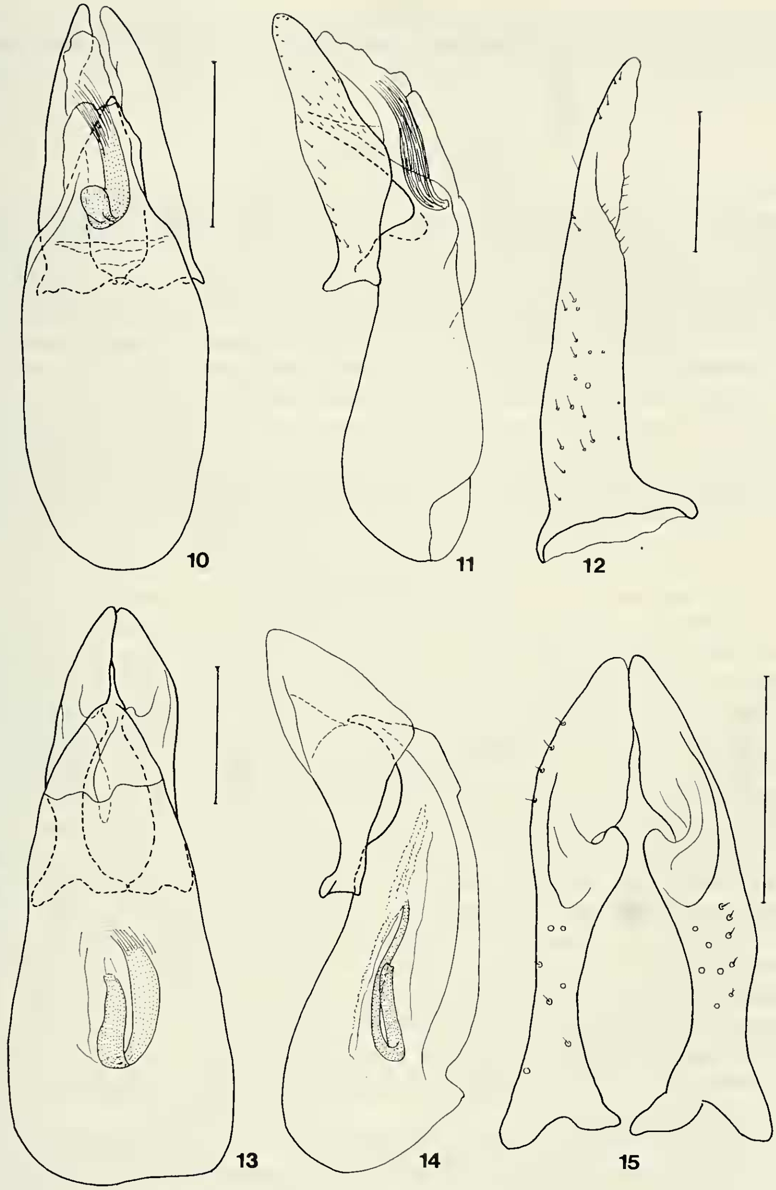
Baeocera schwendingeri sp. n.

Holotype ♂: Kanchanaburi, Sai Yok Nat. Park, 100 m, 21.VII.87 (Schwendinger) (MHNG).

Length 1.4 mm, width 0.90 mm. Body reddish brown, apex of abdomen, tarsi and antennae yellowish. Eyes large. Antennae long, relative length of segments as III 14, IV 20, V 22, VI 20, VII 25, VIII 24, IX 26, X 25, XI 27; antennomeres III to VI slender, almost evenly wide, IV and VI about 5× longer than wide, V about 5.5× longer than wide; VII and VIII with long apical funicle, VII 3.5× longer than wide, VIII almost 5× longer than wide; IX about as wide as VII, XI wider, not quite 3× longer than wide. Pronotum as in *pyricola*. Point of scutellum exposed. Elytra similar as in *pyricola* but sutural margin somewhat elevated, punctation not so coarse, with almost smooth, narrow lateroapical area, most of coarse discal punctures smaller or as large as intervals between them; punctures on lateral area before the centre coarser, larger than intervals. Ventral surface as in *pyricola,* except for somewhat finer punctation and for metepisternum which is 0.03 mm wide in anterior third, then gradually enlarged apically, near metepimeron 0.05 mm wide. Protibiae somewhat curved, meso- and metatibiae straight, metatibiae 0.46 mm long.

Sexual characters of male. Segments 1 to 3 of protarsus somewhat enlarged. Aedeagus (Figs 10 to 12) 0.34 mm long.

B. schwendingeri shares with *pilifera* and *pyricola* the peculiar metasternal punctation and similar male genitalia. The three species form a holophyletic group characterized also by short basal angles of pronotum, impunctate mesosternum, elytron with complete sutural stria, long antennae with slender apical funicle on the segments VII and VIII.



FIGS 10 to 15.

10 and 11. *Baeocera schwendingeri* sp. n., holotype, aedeagus; 12. dtto, paramere; 13 and 14. *Baeocera uncata* sp. n., holotype, aedeagus; 15. dtto, parameres. Scale = 0.1 mm (10, 11, 13-15) and 0.05 mm (12).

B. schwendingeri may be easily separated from *pyricola* and *pilifera* by its smaller size, and by relatively short distal antennomere which is only somewhat longer than the antennomeres VII, IX or X.

Baeocera uncata sp. n.

Holotype ♂: Chiang Mai, Doi Suthep, 1550 m, north slope, 4.XI.85 (MHNG).

Paratypes: 1♂, Chiang Mai, Doi Inthanon, 1250 m, ravine near Forestry Department, 6.XI.85; 1♂, Mae Hong Son, Tham Lok Forest Park, 8 km N Sop Pong, 700 m, 11.-13.XI.85 (MHNG).

Length, 1.65-1.70 mm, width 1.16-1.22 mm. Body dark reddish brown, tarsi and antennae paler to yellowish. Eyes large. Relative length of antennal segments as: III 16, IV 20, V 25, VI 22, VII 26, VIII 24, IX 26, X 22, XI 25 (holotype); III to VI slender, evenly wide, III about 4 × longer than wide, IV 5 × longer than wide, V 6 × longer than wide; VI 5.5 × longer than wide, VII and VIII each about 4 × longer than wide, VII much wider than VI; VIII somewhat narrower than VII, wider than VI; IX slightly wider, XI much wider than VII, and 2.5 × longer than wide. Pronotum laterally rounded; lateral keels not visible in dorsal view; punctation very fine and sparse, barely visible at 50 × magnification; basal angle reaching to center of mesepimeron. Distal part of scutellum exposed. Elytra rather strongly narrowed apically; lateral margin rounded; lateral keel visible only near base in dorsal view; sutural margin not elevated; sutural stria deep, extended along base and joint with lateral stria; both, lateral and sutural striae rather coarsely punctate; interval between sutural margin and sutural stria flat, finely punctate; punctation very fine near base, elsewhere more or less coarse, on inner portion of disk rather sparse (punctures decidedly smaller than intervals) on outer portion dense (punctures often larger than intervals betweens them). Apical segments of abdomen with microsculpture consisting of punctures. Pygidium very finely punctate, margin not keeled. Hypomeron impunctate. Mesepimeron shorter than interval between ist inner end and mesocoxa. Median portion of metasternum somewhat vaulted, with large smooth central area limited laterally and apically by coarse punctures. Punctation on lateral portion of metasternum irregular, coarse and sparse, with a row of punctures along the anterior margin. Mesocoxal area narrow, 0.03-0.04 mm long, with coarse marginal punctures. Metepisternum somewhat vaulted, 0.09-0.11 mm wide, anterad not or barely narrowed, suture deep, straight, distinctly punctured. Punctation on 1st ventrite irregular, coarse and more or less sparse; basal row of coarse punctures dense, extended laterally to or almost to lateral keel, not interrupted in middle, consisting of elongate punctures (except in middle). Tibiae somewhat curved, metatibiae 0.53-0.57 mm long.

Sexual characters of male. Segments 1-3 of protarsus barely enlarged. Lobe of 6th ventrite small, about 0.04 mm long, widely rounded. Aedeagus (Figs 13 to 15) 0.45 mm long.

This species is very similar and closely related to *micros* (Achard) with which it shares most of the taxonomically significant characters, including those of the male genitalia. It differs by the larger metepisterna and by the shape of the wider parameres and the stouter sclerite of the internal sac.

Baeocera ventralis (Löbl)

Eubaeocera ventralis Löbl, 1973*b*: 157.
Baeocera bhutanensis Löbl, 1977*a*: 251.
Baeocera ventralis; LÖBL 1984*a*: 76.

Material examined: 4, Chiang Mai, Doi Inthanon, 1250 m, ravine near Forestry Department, 6.XI.85; 12, Mae Hong Son, Tham Lok Forest Park, 8 km NE Sop Pong, 700 m, 11. and 13.XI.85; 1, Petchaburi, Kaeng Krachan Nat. Park, near Headquarters, 200 m, 16.XI.85 (all MHNG).

Distribution: Thailand, North India, Bhutan, North Pakistan.

Baeocera franzi (Löbl)

Eubaeocera franzi Löbl, 1973*b*: 158.

Material examined: 35, Chiang Mai, ravine 1 km below Mae Nang Kaeo, 54 km NE Chiang Mai (via Chiang Rai), 900 m, 3.XI.85; 10, rd for Wab Pang An 50 km NE Chiang Mai (via Chiang Rai), 900 m, 3.XI.1985; 1, Doi Inthanon, 910 m, 23.II.87 (Schwendinger); 25, Doi Chiang Dao, 450 m, 7.V.87 (Schwendinger); 6, Mae Hong Son, Tham Lok Forest Park, 8 km N Sop Pong, 700 m, 11-13.XI.85; 34, Phetchaburi, Kaeng Krachan Nat. Park, 300-450 m, 17.-19.XI.85; 62♂, 74♀ Khao Yai Nat. Park, forest near Headquarters, 750-850 m, 26.XI.-3.XII.85; 27, hills east of Heo Suwat Waterfalls, Khao Yai Nat. Park, 800-900 m, 1.XII.85 (all MHNG).

Distribution: Thailand.

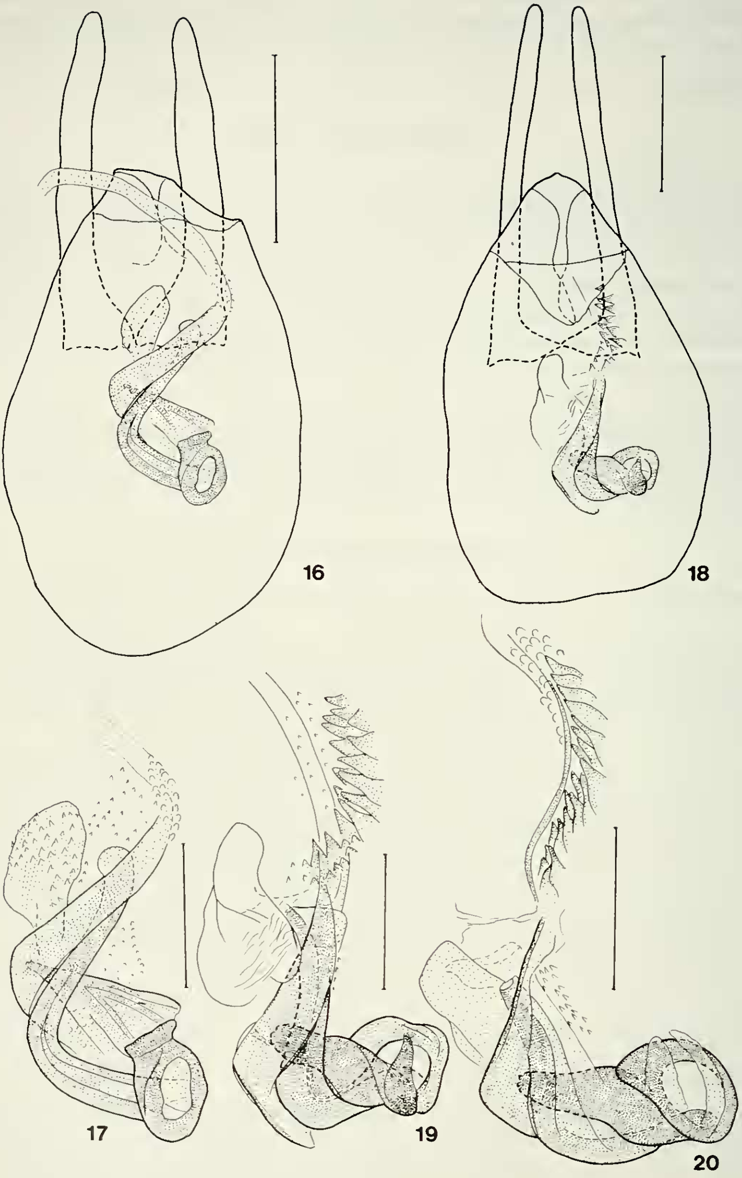
Remarks. Males of *franzi* may be separated from those of *ventralis* by the shape of the parameres of the aedeagus. The females have been identified from samples in which males of only one of the two species were found.

Baeocera schreyeri sp. n.

Holotype ♂: Chiang Mai, Doi Inthanon, 1250 m, ravine near Forestry Department, 6.XI.85 (MHNG).

Paratypes: 14♂, 12♀ as holotype; 1♀, Doi Inthanon, 1020 m, 17.II.87 (Schwendinger); 2♂, 4♀, Doi Suthep, 1050-1550 m, 4 and 5.XI.85; 10♂, 9♀, ravine 1 km below Mae Nang Kaeo, 54 km NE Chiang Mai (via Chiang Rai), 900 m, 3.XI.85; 6♂, 6♀, ravine near rd for Wab Pang An, 900 m, 50 km NE Chiang Mai (via Chiang Rai), 3.XI.85 (all MHNG).

Length 1.05-1.15 mm, width 0.72-0.82 mm. Body reddish brown to blackish, apex of abdomen, antennae and tarsi paler, usually yellowish. Eyes moderately large. Antennae rather long, relative length of segments as: III 12, IV 11, V 15, VI 14, VII 17, VIII 15, IX 18, X 17, XI 21 (holotype); segments III to VI evenly wide, VI almost 5 × longer than wide; VII and VIII slender, their distal funicle distinct, each about 4 × longer than wide, VII distinctly wider than VI; VIII barely wider than VI; IX to XI large, much wider than VII, XI about 2.5 × longer than wide. Pronotum regularly rounded laterally and with marginal keels not visible in dorsal view; punctation very fine, barely visible at 50 × magnification. Point of scutellum usually completely covered, in some specimens exposed. Elytra barely narrowed basally, distinctly narrowed from middle to apex; lateral margin rounded; lateral keel in dorsal view either not visible or exposed near to base; sutural margin usually elevated, except near base; sutural stria fine and coarsely punctured, abbreviated, evanescent 0.05-0.10 mm before reaching level of pronotal lobe; row of punctures accompanying sutural stria extended along basal margin about to middle of basal width of elytron; punctation between sutural margin and sutural stria relatively coarse; whole discal surface, humeral area included, coarsely and densely punctate, with punctures larger than intervals between them and larger than sutural stria punctures. Pygidium very finely punctate. Hypomeron smooth. Apical portion and lateral margin of mesosternum distinctly punctate. Mesepimeron 2 to 2.5 × longer than interval between its inner end and mesocoxa. Median portion of metasternum all over rather coarsely and very densely punctate (also on the usually smooth central area). Punctures on lateral portion of metasternum coarser than those on middle area of metasternum (the apical forming



Figs 16 to 20.

16. *Baeocera schreyeri* sp. n., paratype from rd to Wab Pang An, aedeagus; 17. dtto, internal sac; 18. *Baeocera vidua* sp. n., holotype, aedeagus; 19 dtto, internal sac; 20. *Baeocera pigra* (Löbl) from Khao Yai Nat. Park, internal sac. Scale = 0.1 mm (16, 18) and 0.05 mm (17, 19, 20).

transverse row excepted), and usually somewhat elongate, forming more of less distinct longitudinal rows. Mesocoxal area narrow, 0.02 mm long, with coarse marginal punctures. Metepisternum flat, 0.03-0.05 mm wide, parallel-sided, its inner suture straight, deep and coarsely punctured. First ventrite all over densely and coarsely punctate, with punctures usually somewhat coarser than those on middle part of metasternum; basal row of punctures not interrupted in middle, extended laterally to pleural line, with several elongate lateral punctures. Following ventrites very finely punctured, with extremely fine microsculpture consisting of punctures. Tibiae straight, metatibiae 0.34-0.37 mm long, about 1.2× longer than tarsi.

Sexual characters of male. Segments 1 to 3 of protarsi somewhat enlarged. Aedeagus (Figs 16 and 17) 0.33-0.40 mm long.

B. schreyeri is a member of the *lenta* group and appears closely related to *hygrophila* Löbl. It may be separated from the latter by smaller size of the body (which is usually paler), punctate central area of the metasternum, distinct suture of the metepisternum, shorter apical portion of the median lobe of the aedeagus and by the shape of the parameres and sclerites of the internal sac.

I name this species in honour of Dr. Leslie J. Schreyer, New York.

Baeocera pigra (Löbl)

Eubaeocera pigra Löbl, 1971: 953.
Eubaeocera decipiens Löbl, 1973*b*: 160, **syn. nov.**
Baeocera pigra; Löbl 1979*a*: 93; 1984*a*: 67; 1986*c*: 345.

Material examined: 5, Khao Yai Nat. Park, forest near Headquarters, 750-850 m, 26.XI.-3.XII.85; 2, Khao Yai Nat. Park, forest east Heo Suwat Waterfalls, 800-900 m, 1.XII.85; 2, Chiang Mai, Doi Pui, north slope, ca 1500 m, 19.XII.88 (Trautner & Geigenmüller); 2, Doi Suthep, north slope, ravine, 1400 m, 5.XI.85; 1, Doi Inthanon, 1250 m, ravine near Forestry Department, 6.XI.85; 1, ravine 1 km below Mae Nang Kaeo, 54 km NE Chiang Mai (via Chiang Rai), 900 m, 3.XI.85; 1, Mae Hong Son, Tham Lok Forest Park, 8 km N Sop Pong, 700 m, 13.XI.85 (MHNG, SMNS).

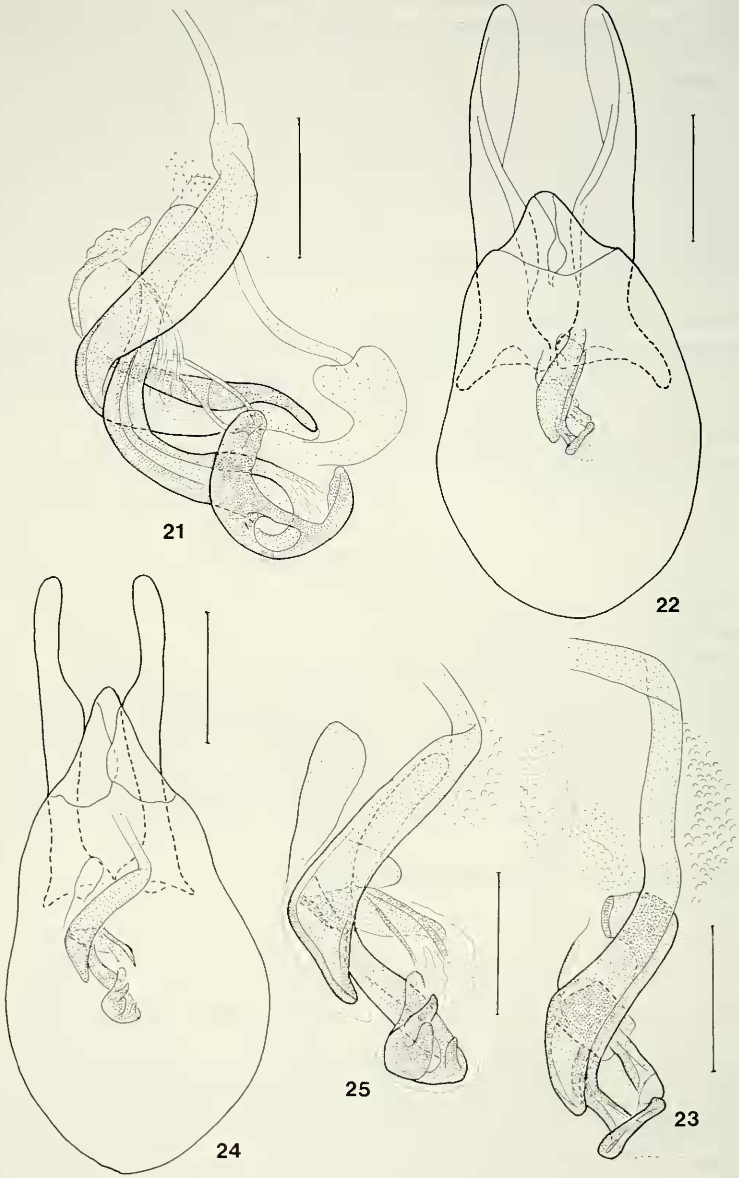
Distribution: Sri Lanka, India, Thailand.

Baeocera vidua sp. n.

Holotype ♂: Chiang Mai, Doi Inthanon, 1250 m, ravine near Forestry Department, 6.XI.85 (MHNG).

Length 1.40 mm, width 0.94 mm, aedeagus 0.42 mm long (Figs 18 and 19). Body dark reddish brown, antennae and legs paler. Most characters as in *wittmeri* Löbl from which it may be distinguished by less rounded lateral margin of elytron, very finely punctate humeral area, rather finely punctate sutural stria, very fine and sparse punctation on almost entire lateral portion of 1st ventrite, rows of sclerotized teeth of the internal sac of the aedeagus lying distally of the complex of sclerites, and inner margin of parameres not notched behind the base.

Both, *wittmeri* and *vidua* share with *pigra* (Löbl) the similar median lobe and internal sac of the aedeagus but the parameres are curved and conspicuously wider in the latter. These three species form a sub-group of the *lenta*-group and are difficult to distinguish by external characters.



FIGS 21 to 25.

21. *Baeocera longicornis* (Löbl) from Doi Inthanon, internal sac; 22. *Baeocera pseudinculta* sp. n., holotype, aedeagus; 23. dtto, internal sac; 24. *Baeocera suthepensis* sp. n., paratype from Doi Suthep, aedeagus; 25. dtto internal sac. Scale = 0.1 mm (22, 24) and 0.05 mm (21, 23, 25).

Baeocera longicornis (Löbl)

Eubaeocera longicornis Löbl, 1971: 955.

Material examined: 1, Chiang Rai, Mae Yao, II.87 (Rougemont); 43, Chiang Mai, Doi Suthep, 1400-1550 m, 4.-5.XI.85; 2, Doi Pui, cca 1500 m, 19.XII.88 (Trautner & Geigenmüller); 3, Doi Inthanon, ravine near "Forestry Department", 6.XI.85; 2, Mae Nang Kaeo, 50 km NE Chiang Mai (via Chiang Rai), 3.XI.85; 2, road for Wab Pang An, 50 km NE Chiang Mai (via Chiang Rai) 900 m, 3.XI.85; 3, Doi Chiang Dao, 1200 and 1500 m, 21.XII.80 (Deharveng & Gouze); 1, Mae Hong Son, Tham Lok Forest Park, 8 km N Sop Pong, 13.XI.85 (MHNG, SMNS).

Distribution: Sri Lanka, Thailand. — New to Thailand.

Remarks. The vesicula of the ejaculatory duct is variable large. In some of the 30 ♂ examined it is just as voluminous as in *vesiculata* Löbl (Fig. 21). As the punctation on the 1st ventrite is often very similar in these two species only the parameres provide sure distinguish features.

Baeocera pseudinculta sp. n.

Holotype ♂: Khao Yai Nat. Park, 750-850 m, 26.XI.-3.XII.85 (MHNG).

Paratypes: 29♂, 24♀, as holotype; 1♂, Khao Yai Nat. Park, 4.-5.V.87 (Schwendinger); 7♂, 5♀ Khao Yai Nat. Park, east Heo Suwat Watterfalls, 800-900 m, 1.XII.85; 2♂, 7♀, Chiang Mai, ravine 1 km below Mae Nang Khaeo, 54 km NE Chiang Mai (via Chiang Rai), 900 m, 3.XI.85; 2♂, 5♀, ravine near road for Wab Pang An, about 50 km NE Chiang Mai (via Chiang Rai), 900 m, 3.XI.85; 1♀, Doi Suthep, 1400 m, ravine, northern slope, 5.XI.85; 1♀, Doi Inthanon, 1650 m, 7.XI.85 (all MHNG).

Length 1.35-1.50 mm, width 0.85-1.0 mm, aedeagus 0.45-0.50 mm long. Body reddish brown to blackish, apex of abdomen, tarsi and antennae paler. In external characters very similar to *inculta* Löbl with which it shares the shape of the body, long antennae with slender antennomeres, complete sutural stria of elytron (extended along base and joint with lateral stria), same punctation on dorsal and ventral surface (lateral portion of metasternum coarsely and densely punctate, with punctures not or barely elongate, punctation on 1st ventrite very fine excepted for coarse, not elongate basal punctures, and elytron coarsely punctate only on basal half). As in *inculta,* the mesocoxal area is very narrow, the suture of metepisternum is deep and coarsely punctured, the mesepimeron is long and the distal portion of the median lobe of the aedeagus is short. *B. pseudinculta* may be separated from *inculta* by the shape of the parameres and by the sclerites of the internal sac of the aedeagus (Figs 22 and 23). In this new species the basal portion of the parameres is much larger in all of the 23♂ examined, and the internal sac differs significantly from that in *inculta.*

Baeocera suthepensis sp. n.

Holotype ♂: Chiang Mai, Doi Suthep, north slope, 1550 m, 4.XI.85 (MHNG).

Paratypes: 9♂, 13♀, as holotype, north and south slopes, 1400-1550 m, 4.-5.XI.85; 1♂, Doi Pui, north slope, ca 1500 m, 19.XII.88 (Trautner & Geigenmüller); 2♂, 1♀, Doi Inthanon, 1650 m, ravine, 7.XI.85 (MHNG, SMNS).

Very similar to the previous species and coloured in the same way. Length 1.30-1.45 mm, width 0.90-0.96 mm, length of aedeagus 0.44-0.47 mm. It differs from *pseudinculta* and also from *inculta* by the punctation on the latero-anterior portion of the metasternum which consist of more or less distinctly elongate coarse punctures. Only the aedeagus (Figs 24 and 25) provides sure diagnostic characters: parameres apically not enlarged as in *inculta* and in basal half much slender than in *pseudinculta;* distal portion of the median lobe longer than in these species, internal sac with a rather large bulbous basal sclerite while in *pseudinculta* and *inculta* the basal sclerite is slender and oblique and the guide-sclerite is distinctly hook-shaped.

Baeocera erroris sp. n.

Holotype ♂: Chanthaburi, Khao Sabap Nat. Park, hills NE Phliu Waterfalls, 150-300 m, 23.-24.XI.85 (MHNG).

Paratype: 1 ♀, as holotype (MHNG).

Length 1.25 mm, width 0.86 mm, aedeagus (Figs 26 and 27) 0.40 mm long. Body reddish brown, legs and antennae paler. With the same essential external characters as in *inculta* and *pseudinculta,* but smaller and with shorter antennae and shorter legs. *B. erroris* shares with both species short apical portion of median lobe of aedeagus. The parameres are rather similar as in *inculta* but only somewhat enlarged in the middle part and not enlarged at apex. The internal sac of *erroris* provides sure diagnostic features which enable to separate this species from the relatives. The shape of the guide-sclerit resembles rather that in *suthepensis* while the basal portion of the complex of sclerites is significantly different.

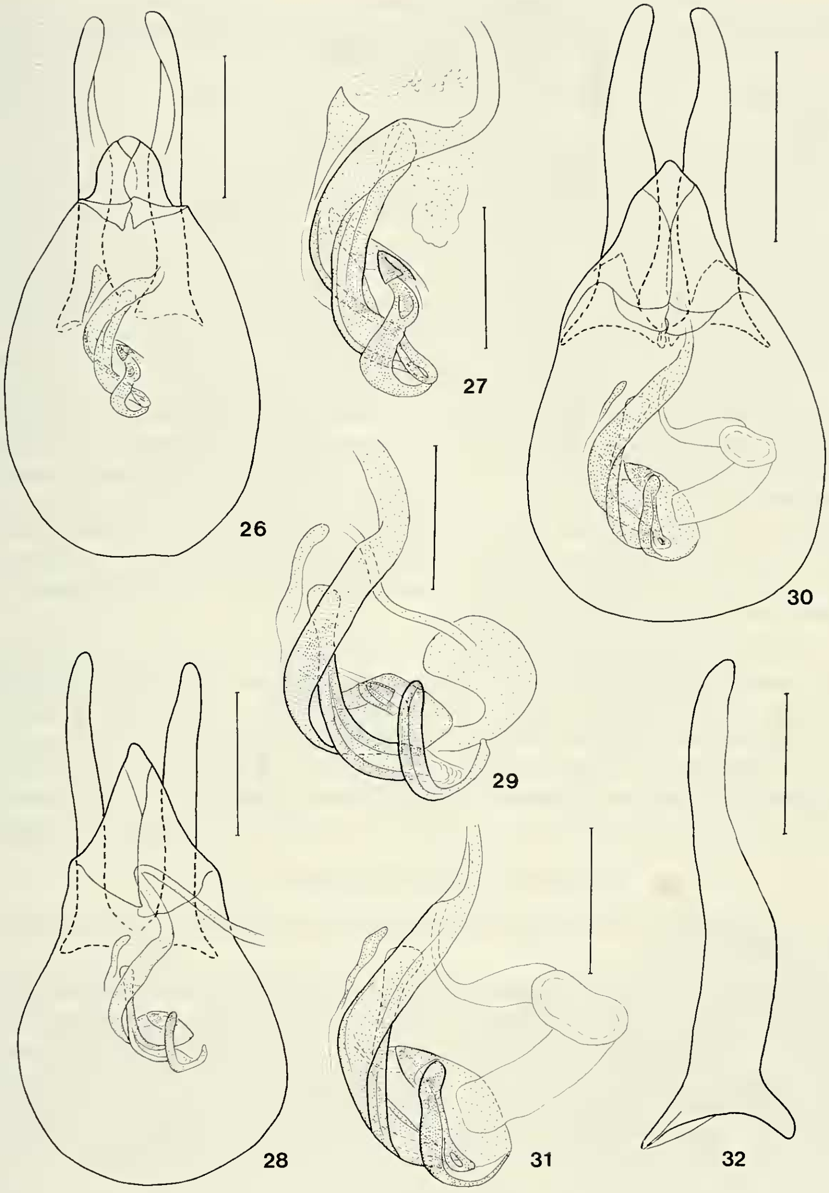
Baeocera karen sp. n.

Holotype ♂: Phetchaburi, Kaeng Krachan Nat. Park, 450 m, 18.XI.85 (MHNG).

Paratypes: 30♂, 24♀, as holotype; 13♂, 19♀, Chiang Mai, road to Wab Pang An, 50 km NE Chiang Mai (via Chiang Rai), 900 m, 3.XI.85; 27♂, 28♀, ravine 1 km below Mae Nang Kaeo, 900 m, 54 km NE Chiang Mai (via Chiang Rai), 3.XI.85; 1♂, Chiang Dao, 500 m, 17.XII.80 (Deharveng) (all MHNG).

Length 1.20-1.35 mm, width 0.76-0.82 mm, aedeagus (Figs 28 and 29) 0.30-0.35 mm long. Body reddish brown to blackish, antennae and legs paler. The combination of the external characters is similar as in *pseudinculta / suthepensis / erroris.* From *pseudinculta* it may be separated by smaller size, less convex body and shorter antennae. The coarse punctures on the lateral portion of the metasternum are not or only somewhat elongate, never as elongate as in *suthepensis,* and the elytral punctation is denser than in *erroris.* In all specimens of *karen* the basal area and the apical 1/3 to 2/5 of elytron are very finely punctate contrasting to the remaining elytral surface which is coarsely punctate. Also the 1st ventrite is very finely punctate, except for the basal margin. The aedeagus in *karen* exhibits features not found in *pseudinculta/suthepensis/erroris:* parameres straight and almost evenly wide, and ejaculatory duct forming a large vesica. The distal portion of the median lobe is fairly long, much longer than in *pseudinculta* or *erroris,* but similar to than in *suthepensis.* In the contrary, no differences have been found between the aedeagi in *karen* and in *vesiculata,* although both species may be readily separated by their punctation (in *vesiculata* the elytron is evenly covered by dense and coarse punctation, and the 1st ventrite is relative coarsely punctate also). Although 56 aedeagi of *karen* were examined, no notable variations in any of the characters has been found, and in the externe characters the hiatus between *karen* and *vesiculata* seems to be invariable.

Remarks. In *deharvengi* the internal sac of the aedeagus is very similar to that of *karen.* More details are given in the description of the latter species.



FIGS 26 to 32.

26. *Baeocera erroris* sp. n., holotype, aedeagus; 27. dtto, internal sac; 28. *Baeocera karen* sp. n., paratype from Kaeng Krachan Nat. Park, aedeagus; 29. dtto, internal sac; 30. *Baeocera deharvengi* sp. n., holotype, aedeagus; 31. dtto, internal sac; 32. dtto, paramere. Scale = 0.1 mm (26, 28, 30) and 0.05 mm (27, 29, 31, 32).

Baeocera deharvengi sp. n.

Holotype ♂: Khao Yai Nat. Park, forest near Headquarters, 750-850 m, 26.XI.-3.XII.85 (MHNG).

Paratypes: 4♂, 3♀, as holotype; 1♂, 2♀, Khao Yai Nat. Park., hills east Heo Suwat Waterfalls, 800-900 m, 1.XII.85 (MHNG).

Length 1.15-1.25 mm, width 0.82-0.87 mm. Body reddish brown, legs and antennae paler. Aedeagus (Figs 30 to 32) 0.31-0.33 mm long. With the same combination of external characters as in *ventralis* or *franzi:* pronotum very finely punctate; elytron with coarse punctation only on its anterior half (in *ventralis/franzi* some of coarse punctures often also behind middle of elytron); sutural stria of elytron obsolete on humeral area, not joint with lateral stria; coarse punctation on metasternum dense, formed by not or somewhat elongate punctures; metepisternum narrow, its suture indicated by outer row of coarse punctures; base of 1st ventrite not ridged or wrinkled, basal punctures not or somewhat elongate, punctation on median portion of 1st ventrite fine but distinct, on outer half of lateral portion almost obsolete (basal punctures excepted). The only feature enabling to distinguish *deharvengi* from *franzi/ventralis,* and also from the similar *manasensis* Löbl, seems to be the less dense and less coarse punctures on basal half of elytron which are smaller or about as large (laterally) as the intervals between them. Also *manasensis* Löbl exhibits the same combination of externe characters, but the coarse elytral punctures are decidedly larger than in *ventralis/franzi.*

B. deharvengi may be easily distinguished from the latter two species by the aedeagus which is rather similar to that in the externally very distinct *longicornis* and *vesiculata* (parameres not notched sub-apically, internal sac without spicules, ejaculatory duct forming a vesicula). It differs from that of *manasensis* especially in the parameres (not abruptly narrowed in the middle) and in the structures of the internal sac. *B. deharvengi,* on the basis of its aedeagus, appears to be closely related to *karen.* The straight parameres and complete sutural stria of elytron in the latter provide good distinguishing characters.

Baeocera species near *puncticollis* Löbl

Material examined: 1♀, Chiang Mai, Doi Angkhang 10 km W Fang, 1500 m, 20.III.87 (Schwendinger) (MHNG).

Remarks. This is a conspicuous species. It resembles *puncticollis* Löbl by the relatively coarsely punctate pronotum and by several distinct punctures on the hypomeron. It may be separated from the latter by the sutural stria of the elytron curved along base, the much finer elytral and metasternal punctation and by the shape of the antennomeres VI to VIII (relative length/width of segments VI 13/4; VII 20/7; VIII 10/4; segment VI apically enlarged). Although this specimen obviously represents an undescribed species, I prefer not to name before males become available.

Baeocera khasiana Löbl

Baeocera khasiana Löbl, 1984*a*: 77.

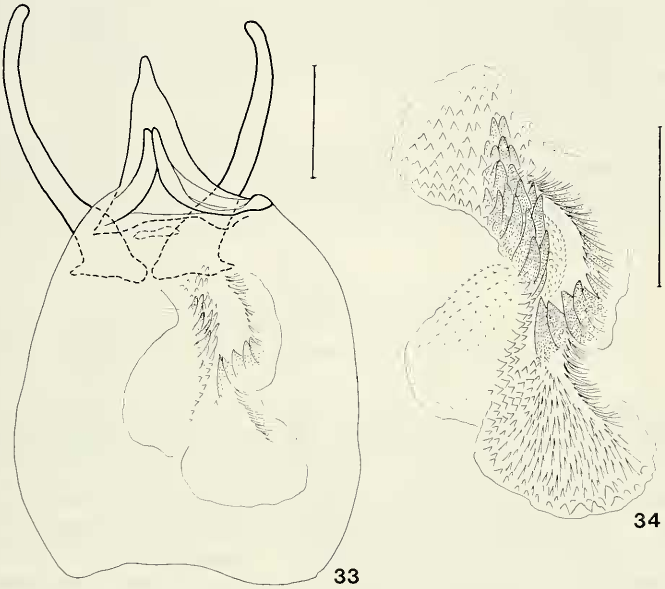
Material examined: 1, Chiang Mai, Doi Inthanon, 1780 m, 3.III.87 (Schwendinger); 1, Doi Chiang Dao, 2000 m, 21.XII.80 (Deharveng & Gouze); 1, Mae Hong Son, Doi Chang, 1950 m, 20 km E Pai, 10.IV.87 (Schwendinger) (all MHNG).

Distribution: India, Thailand. — New to Thailand.

Remarks. *B. khasiana* Löbl is a conspicuous species without any known closer relatives. Unfortunately, all Thai specimens are females so that their identity remains to be confirmed. They differ somewhat from the type-series (from Meghalaya) by the finer elytral punctation.

Baeocera insolita sp. n.

Holotype ♂: Khao Yai Nat. Park, near Headquarters, 750-850 m, 26.XI.-3.XII.85 (MHNG).



FIGS 33 and 34.

33. *Baeocera insolita* sp. n., holotype, aedeagus; 34. dtto, internal sac. Scale = 0.1 mm.

Length 1.35 mm, width 0.95 mm. Body dark reddish brown, tarsi and antennae yellowish. Eyes large. Antennae moderately long, relative length of segments as: III 12, IV 13, V 15, VI 14, VII 18, VIII 13, IX 19, X 17, XI 25; segments III to VI slender, III 3 × longer than wide, IV somewhat slender than III or V, almost 4 × longer than wide, V and VI 4 × longer than wide; VII and VIII only moderately larger than VI, VII 3.5 × longer than wide, VIII 2.5 × longer than wide, barely slender than VII; IX-XI much wider than VII, XI 3 × longer than wide. Pronotum very finely punctate, punctures barely visible at 25 × magnification; lateral pronotal margins rounded, lateral keels not visible in dorsal view. Minute point of scutellum exposed. Elytra moderately narrowed apically; lateral keel not visible in dorsal view; sutural margin not elevated; sutural stria deep, extended along basal margin to humeral hump, not joint with lateral stria, latter distinctly punctate; interval between sutural margin und sutural stria flat, very finely punctate; punctation similar as on pronotum near base and on apical 2/5, elytron elsewhere densely and coarsely punctate, with punctures about as large as intervals between them. Pygidium not keeled, its punctation very fine. Hypomera impunctate. Mesepimeron more than 3× longer than interval between its inner end and mesocoxa. Median portion of metasternum almost flat, rather sparsely and coarsely punctate (except on a small impunctate median area). Lateral portion of metasternum extremely finely punctate. Mesocoxal area very narrow, 0.02 mm long, with coarse marginal punctures not extending laterally behind level of top of mesepimeron. Metepisternum almost flat, at largest point 0.11 mm, narrowed anterad, its impunctate suture somewhat sinuate. Abdomen without microsculpture. Punctation on ventrites extremely fine. First ventrite with dense and coarse row of elongate basal punctures, barely interrupted in middle, extended laterally almost to pleural line; longest punctures about 0.05 mm. Tibiae barely curved, metatibiae 0.45 mm long.

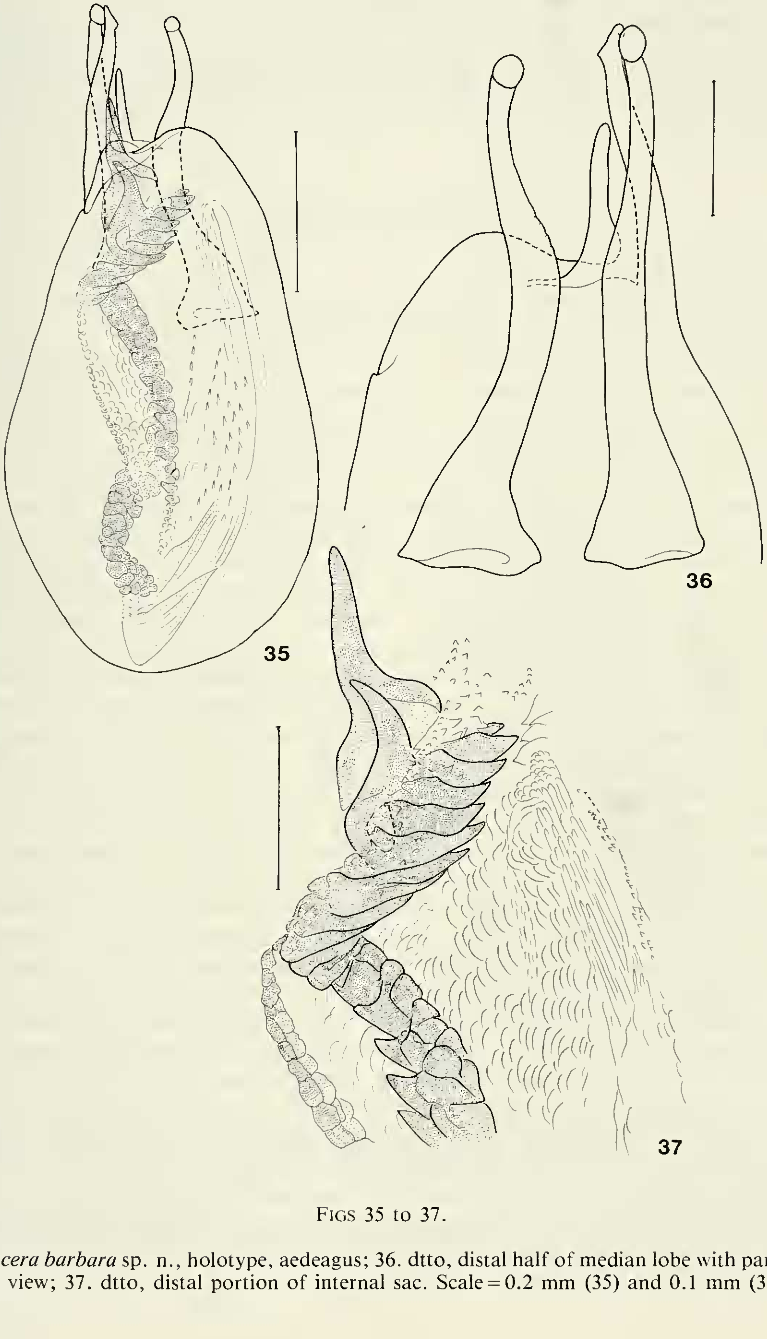
Sexual characters of male. Segments 1 to 3 of protarsi distinctly enlarged, 1st segment narrower than apex of tibia. Apical lobe of 6th ventrite triangular, 0.04 mm long. Aedeagus (Figs 33 and 34) 0.54 mm long.

B. insolita differs notably from all other members of the genus I have examined. The median lobe of its aedeagus is provided with two symmetrically curved, apically convergent dorso-apical sclerotized lobes, as in species of the *Scaphisoma haemorrhoidale*-group. These lobes open when internal sac extruded.

Baeocera barbara sp. n.

Holotype ♂: Khao Yai Nat Park, forest near Headquarters, 750-850 m, 26.XI.-3.XII.85 (MHNG).

Length 1.4 mm, width 1.04 mm. Dark reddish brown, tarsi and antennae yellowish. Eyes large. Antennae moderately long, relative length of segments as: III 11, IV 14, V 19, VI 15, VII 23, VIII 21, IX 24, X 22, XI 32; segment III less than 3× longer than wide, wider than three following ones; IV to VI slender, IV and VI each about 4× longer than wide, V about 5 times longer than wide; VII and VIII subparallel, almost evenly wide, distinctly wider than VI, VII 4×, VIII about 3.5× longer than wide, both slender than IX; XI distinctly wider than VII, 3× longer than wide. Pronotum with lateral margins oblique in basal half, rounded apically (sinuate in lateral view), with lateral keels exposed in apical half, obsolete near base in dorsal view; punctation sparse and very fine, barely visible at magnification 25×. Exposed portion of scutellum large. Elytra moderately narrowed apically; lateral margin almost straight in middle; lateral keel visible in basal third (dorsal view); sutural margin somewhat elevated; sutural stria deep, extended along basal margin and joint with lateral stria; interval between sutural stria and sutural margin flat, barely impressed, very finely punctate; most of elytral surface sparsely and very finely punctate, with punctures as small or somewhat larger than those on pronotum; small area between basal 1/4 and middle of elytron irregularly and coarsely punctate, coarse punctures gradually deepened (not well delimited), some of them larger than intervals. Sutural stria punctate, lateral stria impunctate. Pygidium rather densely and very finely punctate. Hypomeron impunctate. Mesepimeron about 3× longer than interval between its inner end and mesocoxa. Metasternum in median portion vaulted, with two longitudinal rows of coarse punctures on each side of smooth central area, on lateral portion almost impunctate. Mesocoxale area very narrow, 0.02 mm long, with coarse marginal punctures extended laterally along anterior margin of metasternum to level of centre of mesepisternum. Metepisternum vaulted, impressed along straight inner impunctate suture, at largest point 0.12 mm, narrowed anteriorly; abdominal segments not microsculptured. Ventrites sparsely and extremely finely punctate, except for coarse row of basal punctures on 1st ventrite which is not interrupted in middle and extends to pleural keel; lateral punctures distinctly elongate. Tibiae slightly curved, metatibia 0.57 mm long.



FIGS 35 to 37.

35. *Baeocera barbara* sp. n., holotype, aedeagus; 36. dtto, distal half of median lobe with parameres, ventral view; 37. dtto, distal portion of internal sac. Scale = 0.2 mm (35) and 0.1 mm (36, 37).

Sexual characters of male. Segments 1 and 2 of protarsus distinctly enlarged, narrower than tibia, segment 3 of protarsus and segment 1 of mesotarsus somewhat enlarged. Lobe of 6th ventrite subtriangular, 0.12 mm long; apical margin at each side of lobe concavely notched. Aedeagus (Figs 35 to 37) 0.83 mm long.

This new species is related to *macrops* (Löbl) from which it may be easily distinguished by the larger size, the elytral punctation (in *macrops* most of the elytral surface is coarsely punctate), the median lobe of the aedeagus provided with a long dorso-apical apophyse and by the structures of the internal sac, especially by the two large tooth-like distal sclerites.

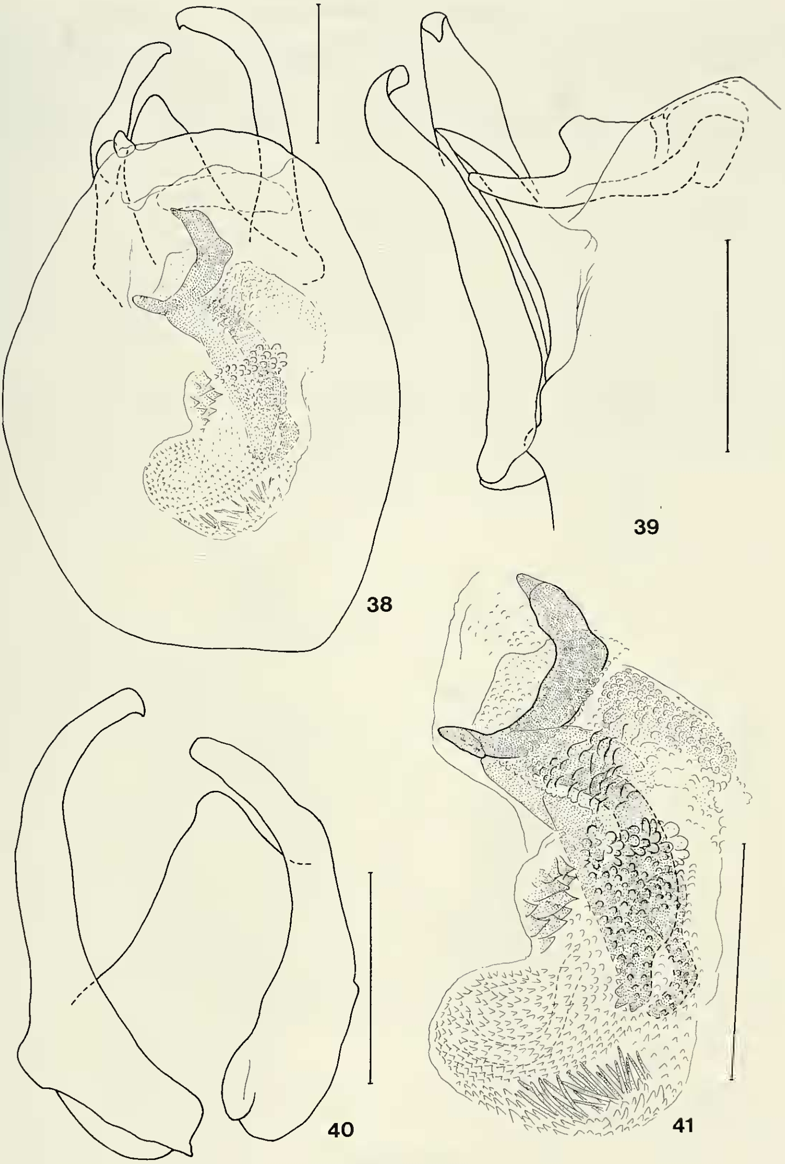
Baeocera pubiventris sp. n.

Holotype ♂: Chiang Mai, ravine 1 km below Mae Nang Kaeo, 54 km NE Chiang Mai (via Chiang Rai), 900 m, 3.XI.85 (MHNG).

Paratypes: 1 ♀, Chiang Mai, as holotype; 1 ♀, road for Wab Pang An, 500 m from road Chiang Mai — Chiang Rai (ca 50 km NE Chiang Mai), 900 m, 3.XI.85 (MHNG).

Length 1.85 mm, width 1.3 mm. Body ochreous, tarsi and antennae yellowish. Eyes large. Antennae long, relative length of antennomeres: III 16, IV 20, V 22, VI 20, VII 27, VIII 25, IX 28, X 29, XI 33 (holotype). Segments III to VI slender, evenly wide, III 4×, IV and VI each 5× longer than wide; VII and VIII moderately enlarged, VII 4.5× longer than wide, barely larger than VIII which is 4× longer than wide; IX and X somewhat wider than VII, XI distinctly wider, about 3× longer than wide. Pronotum with lateral margins rounded (sinuate in lateral view); lateral margin keels in dorsal view obsolent except near basal and apical angle; discal punctation sparse and very fine, consisting of not well delimited punctures barely visible at magnification 25×. Visible portion of scutellum rather large. Elytra moderately narrowed apically; middle portion of lateral margin straight, basal and apical third of latter rounded; lateral keel in dorsal view distinct; sutural stria deep, extended along base to humeral protuberance; punctation very fine near base and along sutural margin, elsewhere rather coarse and dense, consisting of gradually deepened punctures which are usually as large or larger than intervals between them; interval between sutural margin and sutural stria impressed. Punctation on propygidium dense and rather coarse, except near apical margin; punctation on pygidium barely finer but decidedly sparser. Pygidium with complete marginal keel, at apex narrow and rounded. Hypomeron impunctate. Mesepimeron about 4× longer than interval between its inner end and mesocoxa. Median portion of metasternum slightly vaulted, with a dense row of coarse punctures forming an U. Lateral portion of metasternum sparsely and extremely finely punctate, several rather coarse punctures at anterior margin excepted. Mesocoxal area 0.03 mm long, not narrowed laterally, with very dense row of coarse marginal punctures extended laterally. Metepisternum somewhat vaulted, at widest point 0.14-0.16 mm, anterad narrowed, with deep suture. Abdomen without microsculpture. Ventrites sparsely and very finely punctured, except for several less fine setiferous punctures lying near apical margin on median portion of ventrites I to VI, and for very dense and coarse, elongate basal punctures on 1st ventrite. Pubescence on median portion of ventrites long and erected. Protibia straight, meso- and metatibia somewhat curved. Metatibia 0.71-0.74 mm long, about 1.3× longer than metatarsus.

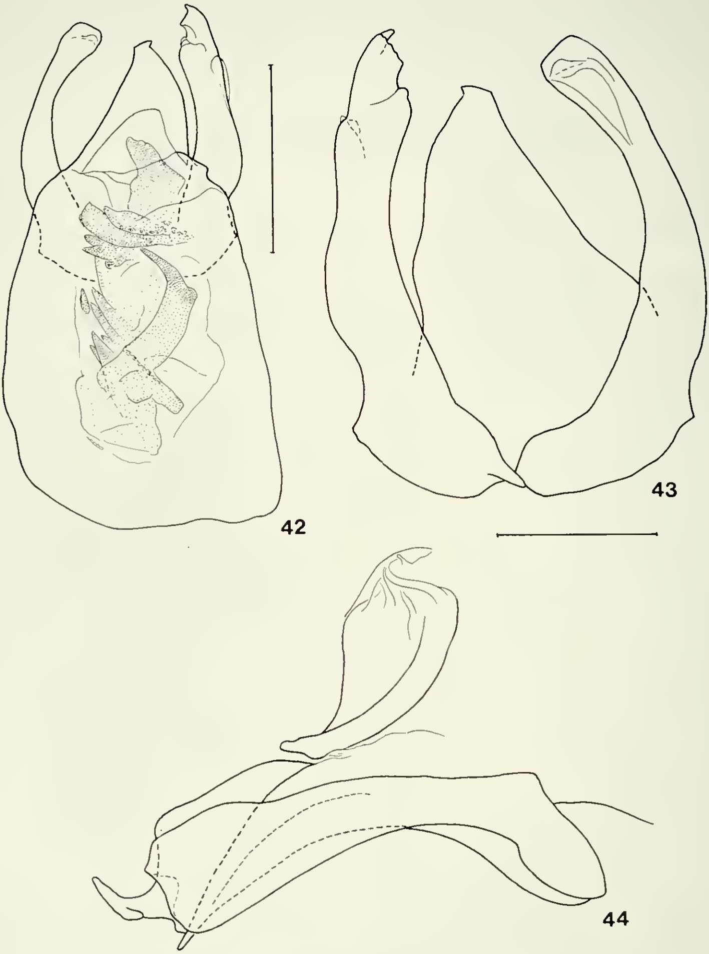
Sexual characters of male. Segment 1 of pro- and mesotarsus gutter-like, strongly enlarged, larger (protarsus) or as large (mesotarsus) as apex of tibia. Segment 2 of protarsus somewhat enlarged. Apical lobe of 6th ventrite triangular, 0.08 mm long. Aedeagus (Figs 38 to 41) 0.93 mm long.



FIGS 38 to 41.

38. *Baeocera pubiventris* sp. n., holotype, aedeagus; 39. dtto, distal portion of median lobe with parameres, lateral view; 40. dtto, ventral view; 41.dtto, internal sac. Scale = 0.2 mm.

Remarks. This species belongs to the group *monstrosa,* and is similar and certainly closely related to *gilloghyi* (Löbl) with which it shares simple parameres of the aedeagus. In all other members of the group the right paramere is enlarged and lobed and the left paramere has either a basal apophyse (*inaequicornis* Champion, *breveapicalis* (Pic), *producta* (Pic), *doriai* (Pic), *takizawai* Löbl, *robertiana* nom. n.*) or is simple (*monstrosa* (Löbl), *paradoxa* (Löbl), *nakanei* (Löbl). *B. pubiventris* may be distinguished from *gilloghyi* by longer and denser abdominal pubescence and, as from all other species of the genus, by the shape of the parameres and of the sclerotized pieces of the internal sac.



FIGS 42 to 44.

42. *Baeocera innocua* sp. n., holotype, aedeagus; 43. dtto, distal portion of median lobe, ventral view; 44. dtto, lateral view. Scale = 0.2 mm (42) and 0.1 mm (43, 44).

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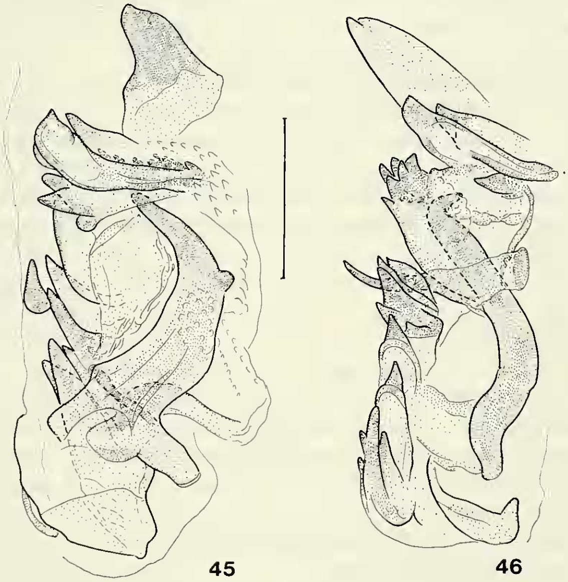
* *Baeocera robertiana* **nom. nov.** for *Baeocera roberti* Löbl, 1986, from Sumatra (*Archs Sci. Genève* 39: 87-89); nec *Baeocera mussardi roberti* Löbl, 1979, from South India (Revue suisse Zool. 86: 89-90).

Baeocera innocua sp. n.

Holotype ♂: Khao Yai Nat. Park, hills east of Heo Suwat Waterfalls, 800 m, 1.XII.85 (MHNG).
Paratype ♂: as holotype (MHNG).

Length 1.5-1.6 mm, width 1.07-1.12 mm. Similar to *pubiventris* and *gilloghyi,* differs from both as from other species of the group *monstrosa* by the shape of the parameres and by the structures of the internal sac. *B. innocua* may be separated from *pubiventris* by the combination of the following characters: body smaller, antennae shorter. Relative length of antennomeres in holotype: III 12, IV 15, V 18, VI 16, VII 22, VIII 19, IX 24, X 23, XI 32. Segment III 3×, IV and VI 4×, V 4.5× longer than wide; VII and VIII about 3× longer than wide; XI somewhat larger than X, about 3.5× longer than wide. Basal pronotal angle reaching anterior margin of metepisternum. Finely punctate basal portion of elytron larger, about as long as 1/6 of maximal elytral length. Interval between sutural margin and sutural stria not impressed. Pygidium finely punctate, lacking marginal keel. Mesepimeron 3× longer than distance between its inner end and mesocoxa. Metepisternum narrower, 0.11 mm wide. Punctation on ventrites 1 to 6 evenly fine (except for basal row on 1st ventrite), pubescence on median portion of ventrites rather short. Metatibia 0.57-0.62 mm long, 1.3× longer than metatarsus.



FIGS 45 and 46.

45. *Baeocera innocua* sp. n., holotype, internal sac; 46. dtto, paratype, lateral view. Scale = 0.1 mm.

Sexual characters of male. Segments 1 and 2 of pro- and mesotarsi distinctly enlarged, narrower than apex of tibiae. Apical lobe of 6th ventrite triangular, 0.07 mm long. Aedeagus (Figs 42 to 46) 0.55-0.57 mm long.

Scaphisoma Leach

This is the largest genus of the scaphidiids including almost 500 species. It is characterized by short 3rd antennomere; large maxillary galea; slender, apically narrowed last segment of maxillary palpus; apically protruding basal angles of pronotum; mesepimeron almost always dinstinct; 1st ventrite with coxal areas (except in *ineptum* Löbl from Borneo, *carolinae* Casey from North America and unidentified species from South America); distinct epipleura; distant meso- and metacoxae.

The aedeagi are in many species symmetrical with simple tubular internal sac and slender parameres (i.e. *rufum, pseudorufum, invisum*), as in primitive staphylinids (Omaliinae). Many other species exhibit modified aedeagus. The modification may affect the articular process of the median lobe only (some species of the *unicolor*-group), the whole median lobe *(maindroni)* or only its distal portion (*pictum*- and *haemorrhoidale*-group), and/or the parameres and the internal sac. All degrees of complexity and combinations of these modifications may be found so that it is virtually impossible to separate the species groups in satisfactory defined genera.

Key to the Thai Scaphisoma

1 Elytral disk with at least some very coarse punctures arranged in somewhat oblique rows. Abdominal microsculpture distinct, consisting of transverse waves or lines 2

— Elytral disk without rows of coarse punctures 9

2 Whole apical third of elytron very finely punctate 3

— Whole or almost whole elytral disk coarsely punctate 4

3 Anterior half or two thirds of elytron densely and coarsely punctate. Hypomeron and lateral portion of metasternum microsculptured .... *rufescens*

— Most of elytral disk finely punctate, coarse punctures arranged in 3 rows, few additional coarse punctures situated on a small latero-central area .... *pseudatrox*

4 Apical fourth or fifth of elytron yellowish or ochreous, similar as abdomen .... *rouyeri*

— Elytral colouration different 5

5 Hypomeron lacking microsculpture .... *cribripenne*

— Hypomeron with microsculpture consisting of longitudinal striae 6

6 Punctation on lateral and central part of pronotum almost evenly fine 7

— Pronotum laterally much coarser punctate than on center 8

7 Parameres of aedeagus evenly slender between middle and apex. Apex of elytron not markedly darkened .... *rougemonti*

— Parameres wider at apex than in middle portion (width of hyaline lobe excepted). Apex of elytron darkened .... *delictum*

8 Middle portion of parameres narrowed. At least some punctures on lateral portion of pronotum only somewhat larger than intervals between them .... *pseudodelictum*

— Parameres narrowest behind their middle. All punctures on lateral portion of pronotum much larger than intervals between them .... species C

9 Minute species, body less than 1 mm long. Elytra immaculate. Antennae moderately long .... cf. *minutissimum*

— Body usually notably longer than 1 mm, if only somewhat longer elytra maculate or antennae conspicuously long 10

10 Antennomeres III and IV conspicuously short, IV as long as to 1.5× longer than III 11
— Antennomere IV slender, at least 2× longer than III or III conspicuously elongate *(solutum)* 15
11 Mesepimeron obsolete .... *lepidum*
— Mesepimeron distinct 12
12 Elytron with sutural stria not extended along basal margin .... *gracilendum*
— Sutural stria extended along basal margin to humeral area of elytron, or at least to middle of basal width 13
13 Abdominal microsculpture consisting of points .... species A
— Abdominal microsculpture formed by distinct transverse striae 14
14 Body rufous, elytra immaculate .... *pseudorufum*
— Body blackish, elytron with a large reddish spot and yellowish apex .... species B
15 Elytron with sutural stria curved at base and distinctly extended along basal margin 16
— Sutural stria often curved at base but not extended laterally along basal margin of elytron 24
16 Sutural and lateral striae joint at humeral area of elytron .... *mirandum*
— Sutural and lateral striae not joint 17
17 Elytra maculate. Large species about 1.8 mm long. Pronotum coarsely punctate .... *rufonotatum*
— Elytra immaculate. Pronotum finely punctate. Smaller species 18
18 Mesocoxal area large, longer than metacoxal area 19
— Mesocoxal area narrow, shorter than metacoxal area 21
19 Body very dark reddish brown to blackish, 1.6-1.8 mm long. Elytron near base coarser punctate than pronotum. Median portion of 1st ventrite denser and coarser punctate than lateral portions .... *suthepense*
— Body pale reddish brown, 1.2-1.5 mm long. First ventrite all over very finely punctate 20
20 Apical portion of median lobe of aedeagus convexly curved in lateral view .... *brunneonotatum*
— Apical portion of median lobe sinuate in lateral view .... *agile*
21 Body rather pale reddish brown. Metacoxal area very large and very convex, reaching about centre of 1st ventrile .... *rufum*
— Body dark reddish brown to blackish. Metacoxal area small and narrow, much shorter than half of 1st ventrite 22
22 Rows of coarse punctures at margines of metacoxal areas extended along mediobasal margin of 1st ventrite and joint together. Mesocoxal areas margined by coarse punctures .... *fastum*
— Mediobasal margin of 1st ventrite without a row of coarse punctures. Mesocoxal areas with fine marginal punctures 23
23 Mesepimeron much shorter than interval between its end and mesocoxa. Lateral portion of base of 1st ventrite and metacoxal area margined by elongate punctures .... *canaliculatum*
— Mesepimeron about as long as interval between its end and mesocoxa. Metacoxal area margined by round punctures, basal margin of 1st ventrite laterally of metacoxal area impunctate .... *unicolor*
24 Pronotum bicoloured, elytra maculate 25

— Pronotum unicoloured 26

25 Pronotum pale, with two dark median fasciae. Sutural striae of elytra almost parallel .... *paliferum*

— Pronotum pale with black base and black spot on mediobasal area. Sutural striae of elytra conspicuously divergent anteriorly .... species D

26 Pronotal punctation conspicuous, distinct at 10× magnifications. Lateral portion of metasternum coarsely punctate .... *valens*

— Pronotum finely or very finely punctate, with punctures not or barely visible at 10× magnification. Lateral portion of metasternum usually very finely punctate, eventually with coarse punctures arranged in a transverse row 27

27 Elytral disk finely or very finely punctate, punctures along sutural stria and on interval between it and sutural margin coarse. Sutural striae anteriorly strongly divergent 28

— Elytral punctation different. Sutural striae parallel or moderately divergent anteriorly 30

28 Pronotum as dark as elytral base, elytra not or indistinctly maculate .... *jacobsoni*

— Pronotum paler than elytral base, elytra distinctly maculate 29

29 Lateral portion of metasternum with a row transverse of punctures in front of metacoxa .... *dohertyi*

— Lateral portion of metasternum lacking a transverse row of punctures .... *lannaense*

30 Small species 1.1-1.2 mm long. Metasternum with a row of punctures in front of metacoxa .... *javanum*

— Larger species or metasternum lacking a transverse row of punctures 31

31 Pronotum and elytra unicoloured, ochreous or reddish brown. Apical portion of elytron not or barely paler than centre of elytron 32

— Elytron maculate and/or with large well delimited pale apical portion, or pronotum and elytra evenly dark reddish brown to black 41

32 Metasternum with deep elongate median impression. Parameres of aedeagus bilobed .... *operosum*

— Metasternal centre not impressed, or with a foveiform impression lying behind middle, or with two medio-apical shallow impressions. Parameres not bilobed 33

33 Metasternum lacking a row of punctures in front of metacoxa. Ventrites not microsculptured or with microsculpture consisting of points 34

— Metasternum with a row of punctures in front of metacoxa. Ventrites usually with microsculpture consisting of striae 38

34 Articular process of median lobe very large 35

— Articular process of median lobe small, inconspicuous 36

35 Distal portion of median lobe slender .... *nietneri*

— Distal portion of median lobe flattened and strongly enlarged .... *maindroni*

36 Length 1.7 mm. Elytron finely punctate, non of discal punctures larger than intervals between them. Metacoxal area more than 0.10 mm long .... *segne*

— Length 1.5-1.6 mm. Elytron rather coarsely punctate, at least some discal punctures notably larger then intervals between them 37

37 First ventrite with coarse basal punctures between metacoxal areas. Parameres of aedeagus not narrowed apically .... *pressum*

— First ventrite very finely punctate between metacoxal areas. Parameres of aedeagus narrowed apically .... *aurun*

38 Elytron with base distinctly finer punctate than centre, and humeral area almost as finely punctate as pronotum .... *scabiosum*

— Elytral base about as coarsely punctate as centre, punctation on humeral area much coarser than that on pronotum 39

39 Medio-apical portion and centre of metasternum about evenly finely punctate. Laterobasal portion of 1st ventrite distinctly microsculptured .... *dives*

— Medio-apical portion of metasternum coarser punctate than centre. Laterobasal portion of 1st ventrite not microsculptured 40

40 Punctures on mediobasal portion of 1st ventrite decidedly coarser than on lateral portion .... *bispinosum*

— Punctation on 1st ventrite evenly fine (marginal punctures of metacoxal area excepted) .... *siamense*

41 Body ocreous, elytron with dark spots or fasciae 42

— Colour pattern different 47

42 Sutural striae of elytra diverge anteriorly .... *binhanum*

— Sutural striae of elytra parallel in anterior portion 43

43 Small species 1.05-1.15 mm long. Elytral and pronotal punctation about evenly fine. Metasternum lacking transverse row of punctures in front of metacoxa .... *invisum*

— Larger species. Elytra much coarser punctate than pronotum. Metasternum with a distinct row of punctures in front of metacoxa 44

44 Elytron darkened along base, sometimes also darkened along sutural margin and behind center .... *atronotatum*

— Elytron darkened at apex, sometimes also along basal margin 45

45 Smaller species 1.45-1.55 mm long. Mesepimeron about 2 × longer than interval between its end and mesocoxa 46

— Larger species 2 mm long. Mesepimeron about as long as interval between its end and mesocoxa .... *velox*

46 Parameres of aedeagus only in apical portion enlarged and with weakly sclerotized inner margin .... *amabile*

— Parameres largest before middle, inner margin (base excepted) weakly sclerotized .... *pseudamabile*

47 Body very dark reddish brown to black, elytra with a distinct pale basal or posthumeral spot and pale apical area 48

— Colour pattern different 50

48 Elytra with sutural striae parallel or barely divergent anteriorly, on basal 1/3 about as finely punctate as pronotum and much finer punctate than on center .... *cederholmi*

— Sutural striae distinctly divergent anteriorly, punctation similar on inner basal portion and on center of elytron 49

49 Larger species 1.45-1.60 mm long. Anterior elytral spot small, usually yellowish and well delimited .... *tetrastictum*

— Smaller species 1.20-1.40 mm long. Anterior elytral spot fairly large, usually reddish and not well delimited .... *obliquemaculatum*

50 Metasternum with a distinct transverse row of rather coarse punctures parallel to metacoxa 57

— Metasternum without any trace of row of punctures in front of metacoxa, if several very fine puncture form an indistinct row, impressed behind center . 51
51 Body blackish to black, apex of elytron not or very narrowly paler 52
— Body dark reddish brown to black, elytron with large pale apical area 53
52 Humeral area of elytron almost smooth, punctation behind it coarse and very dense, punctures much larger than intervals between them .... *vagans*
— Humeral area of elytron very finely punctate, surface behind it finely punctate, punctures as large or smaller than intervals .... *solutum*
53 Elytron with large finely punctate basal portion extended laterally to middle third of lateral length .... *innotatum*
— Finely punctate basal portion of elytron much shorter 54
54 Metasternum laterally microsculptured (except on narrow anterior portion) .... *favens*
— Metasternum not microsculptured or microsculptured only near apical margin 55
55 Metasternum with a foveiform impression behind center. Elytral pale apical area longest near lateral margin.................................. *cuspidatum*
— Metasternum medio-apically flattened, not impressed. Pale apical area about evenly long at lateral and sutural margin 56
56 Metacoxal area not or barely longer than mesocoxal area. Apical 1/4 of elytron pale .... *incurvum*
— Metacoxal area notably longer than mesocoxal area. Apical 1/3 of elytron pale .... *spissum*
57 Elytron with apex as dark or barely paler than remaining surface .... *meracum*
— Elytron distinctly bicoloured, dark reddish brown to black with yellowish or ochreous apical portion 58
58 Smaller species 1.25-1.40 mm long. Aedeagus small, less than 0.5 mm long .... *egenum*
— Larger species, at least 1.5 mm long. Aedeagus notably more than 0.5 mm long 59
59 Paramere of aedeagus with a conspicuous tooth in middle of inner margin .... *armatum*
— Paramere of aedeagus lacking tooth on inner margin 60
60 Internal sac of aedeagus with a large flat elongate sclerite, and with rows and bunches of smaller sclerites 61
— Internal sac of aedeagus with bunches and rows of small sclerotized teeth or spines, lacking a large unpaired sclerit 62
61 Large sclerit of internal sac sinuate .... *tortile*
— Large sclerit of internal sac almost regularly narrowed apically, not sinuate .... *khao*
62 Sclerotized teeth in apical portion of internal sac approximate, forming a single bunch .... *morosum*
— Apical sclerotized teeth of internal sac widely separated, forming two rows .... *karen*

Scaphisoma rufum Achard

Scaphosoma rufum Achard, 1923: 115.
Scaphisoma rufum; LÖBL 1966: 132; 1970: 756; 1972: 117; 1986*a*: 142.

Material examined: 1, Khao Yai Nat. Park, near Headquarters, 750-850 m, 26.XI.-3.XII.1985; 1, Khao Yai Nat. Park, hills east Heo Suwat Waterfalls, 900 m, 1.XII.1985 (MHNG).

Distribution: India, Thailand, Singapore, Japan (Ryukyu's). — New to Thailand.

Scaphisoma pseudorufum Löbl

Scaphisoma pseudorufum Löbl, 1986*a*: 143.

Material examined: 1, Phuket; island Phuket, hills near Surin Beach, 1.-6.XI.87 (Heiss) (MHNG).

Distribution: India, Thailand. — New to Thailand.

Scaphisoma species A

Material examined: 1, Chiang Mai, Doi Inthanon, 2300 m, pit-fall trap, VIII.87 (Schwendinger); 1, Doi Suthep, 1600 m, 4.XI.85 (MHNG).

Remarks. Both specimens are females. They cannot be associated with any known species, but are similar to *funiculare* Löbl in general appearance (size of body, short 4th antennomere, elytron with laterally extended sutural stria, very finely punctate metasternum, abdominal microsculpture consisting of points). They differ from the latter species in the very finely punctate pronotum, antennomere V about 3 × longer than IV and almost as long as VI, body less convex, reddish brown with paler apex of elytra.

Scaphisoma species B

Material examined: 1, Khao Yai Nat. Park, near Headquarters, 750-850 m, 26.XI.-3.XII.85 (MHNG).

Remarks. This specimen is a female representing a fairly well characterized species which may be distinguished by the combination of the following features: body 1.8 mm long; elytron with a large reddish discal spot, and apex yellowish; pronotum finely and densely punctate; elytron with sutural stria extended to humeral area, median portion or metasternum densely punctate; abdominal microsculpture consisting of transverse lines; antenna conspicuously short, antennomere IV minute, somewhat longer than III, about as long as 1/3 of V, antennomere VI distinctly longer than V.

Scaphisoma rufonotatum Pic

Scaphosoma rufonotatum Pic, 1926*b*: 143.

Material examined: 1, Phuket, island Phuket, hills near Surin Beach, 1.-6.XI.86 (Heiss) (MHNG).

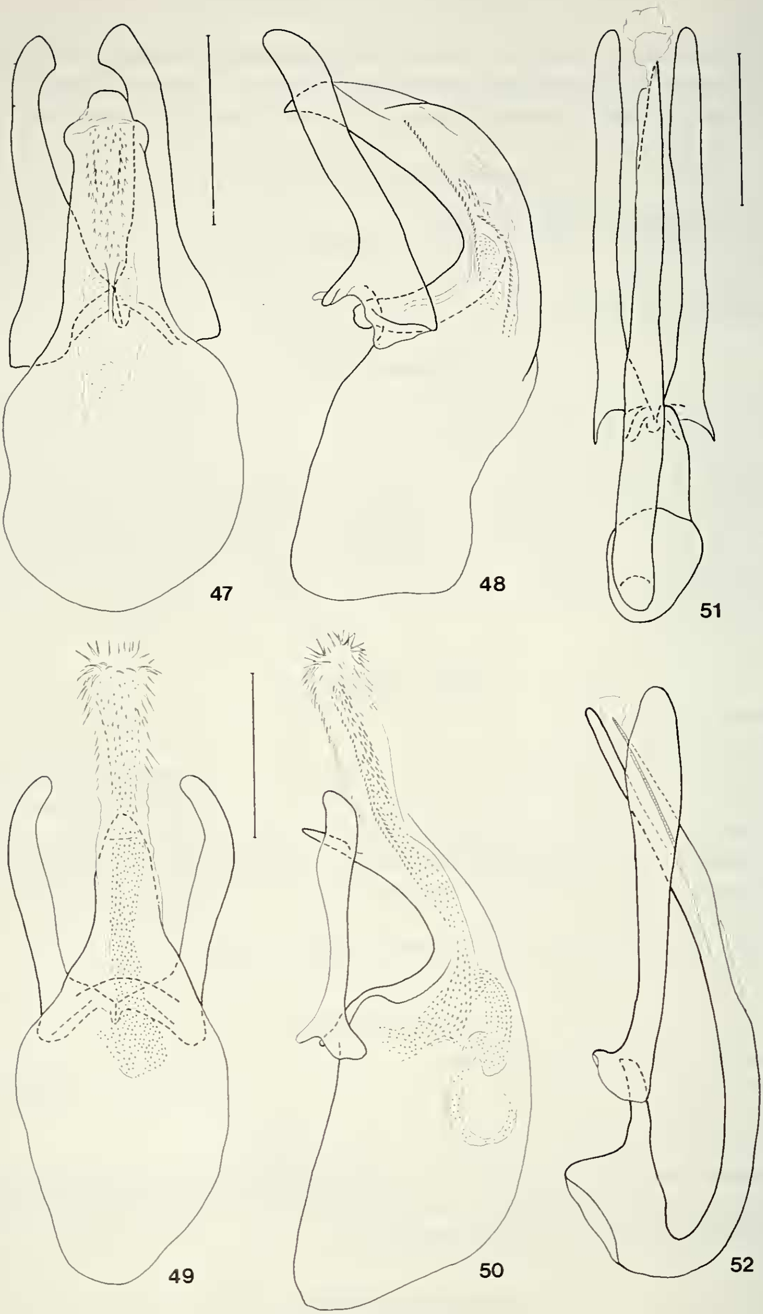
Distribution: Vietnam, Thailand. — New to Thailand.

Remarks. The Thai specimen is a female and its identity should by confirmed. However, the species is well characterized and I have not found any feature distinguishing it from Vietnamese specimens of *rufonotatum*.

Scaphisoma vagans sp. n.

Holotype ♂: Chanthaburi, Khao Sabap Nat. Park, near Phliu Waterfalls, 150-300 m, 23.-24.XI.85 (MHNG).

Paratypes: 1 ♀ as holotype; 1 ♂, 1 ♀ Khao Yai Nat. Park, near Headquarters, 750-850 m, 26.XI.-3.XII.85; 1, "M TAK" (Sedlacek) (all MHNG).



FIGS 47 to 52.

47 and 48. *Scaphisoma vagans* sp. n., paratype from Khao Yai Nat. Park, aedeagus; 49 and 50. *Scaphisoma invisum* sp. n., paratype from Khao Sabap Nat. Park, aedeagus; 51 and 52. *Scaphisoma gracilendum* sp. n., holotype, aedeagus. Scale = 0.1 mm.

Length 1.25-1.30, width 0.85-0.88 mm. Body very dark, almost blackish, apex of abdomen ochreous, femora and tibiae reddish, tarsi and antennae yellowish. Diagnostic characters as in *bayau* Löbl, except for longer antennae and different elytral punctation. Relative length of antennal segments as: III 5, IV 15, V 15, VI 19, VII 22, VIII 19, IX 22, X 24, XI 28 (holotype). Elytral punctation decidedly coarser and denser than in *bayau,* on central portion of elytron much denser than elsewhere, near apex moderately dense and coarse, on humeral area about as fine as on pronotum. Aedeagus (Figs 47 and 48) 0.28-0.40 mm long.

This species is similar to *simplex* by the elytral punctation, but the coarse and dense punctures are situated on a smaller area, and the body is much paler than in the latter. *S. vagans* differs from both, *bayau* and *simplex,* in the shape of the parameres of the aedeagus.

Scaphisoma invisum sp. n.

Holotype ♂: Chanthaburi, Khao Sabap Nat. Park, near Phliu Waterfalls, 150-300 m, 23-24.XI.85 (MHNG).

Paratypes: 10♂, 11♀, as holotype; 1♂, Chiang Mai, Doi Inthanon, 1650 m, 7.XI.85 (MHNG).

Length 1.05-1.15 mm, width 0.78-0.83 mm. Body moderately convex, ochreous, with elytra darkened on basal fourth (but usually not on humeral area), along sutural striae and on apical fourth; apex of abdomen, legs and antennae yellowish. Antennae long, relative length of segments: III 7, IV 15, V 19, VI 15, VII 24, VIII 19, IX 25, X 25, XI 29 (holotype). Pronotum with rounded lateral margins; lateral keel usually visible in dorsal view; punctation very fine, visible at 24× magnification. Point of scutellum exposed. Elytra moderately narrowed apically, with rounded lateral margins; lateral keel visible in dorsal view, except in apical portion; apical margin rounded, inner apical angle lying in or somewhat behind level of outer angles; sutural margin not elevated; sutural stria rather fine, not or very shortly curved near base; interval between sutural margin and sutural stria flat, very finely punctate; discal punctation very fine, as or somewhat more distinct as that on pronotum. Pygidium extremely finely punctate. Mesepimeron conspicuously oblique, longer than interval between its end and mesocoxa. Metasternum all over very densely and extremely finely punctate; median portion weakly convex, without medio-apical impressions. Mesocoxal area large, about 0.10 mm long, almost subcylindrical, with very finely punctate margin. Metepisternum flat, 0.07-0.10 mm wide, anterad not or moderately narrowed, with straight inner margin. Abdominal segments with microsculpture consisting of short transverse lines. First ventrite similarly punctate as metasternum; metacoxal area 0.07 mm long, its margin convex, very finely punctate. Tibiae slender, I and II somewhat curved.

Sexual characters of male. Segments 1 to 3 of protarsi somewhat enlarged. Aedeagus (Figs 49 and 50) 0.30-0.33 mm long.

This species may be readily distinguished by its colour pattern and large mesocoxal areas. It is possibly related to *discretum* Löbl which has a similar aedeagus, but no synapomorphy is found linking these two species. *S. discretum* may be easily separated from *invisum* by dark colour of the body and conspicuously short antennomere IV.

Scaphisoma gracilendum sp. n.

Holotype ♂: Khao Yai Nat. Park, near Headquarters, 750-850 m, 26.XI.-3.XII.85 (MHNG).
Paratype ♂, as holotype (MHNG).

Length 1.3 mm, width 0.90 mm. Body rather convex. Upper surface very dark, almost black, thorax ventrally somewhat paler, abdomen dark reddish brown. Femora and tibiae reddish brown, antennae and tarsi ochreous to yellowish. Antennae moderately long, relative length of segments: III 4, IV 6, V 12, VI 18, VII 23, VIII 14, IX 21, X 20, XI 27 (holotype); III minute, IV very short, about 1.5× longer than III; V wider than IV, about 2.5× longer than wide; VI wider than V, 3× longer than wide; VII large, much wider than VI, 3× longer than wide; VIII barely wider than VI, almost 2.5× longer than wide; XI as wide as VII, 3.5× longer than wide. Pronotum with rounded lateral margins; lateral keels not visible in dorsal view; punctation very fine, barely visible at 50× magnification. Point of scutellum exposed. Elytra strongly narrowed apically; lateral margins rounded; lateral keels in dorsal view visibles from base to apex; apical margines somewhat rounded, inner apical angle lying behind level of outer angles; sutural margin not elevated; sutural striae fairly deep, slightly divergent from apex to middle, then parallel, curved externally near base, not extended along basal margin; interval between sutural margin and sutural stria flat, with a very dense row of rather coarse punctures becoming obsolete apically; punctation almost all over coarse and dense, very fine and sparse (similar as on pronotum) on a large laterobasal, up to 0.15 mm long area, and apically along lateral margin; on a rather large laterocentral area punctation particularly dense, with almost confluent punctures. Propygidium and base of pygidium relatively coarsely punctured, most of pygidium finely punctured. Mesepimeron about as long as interval between its end and mesocoxa. Metasternum sparsely and very finely punctate, except in and around two medioapical impressions; central portion of metasternum flat, area between mesocoxae convex. Mesocoxal area 0.06 mm long, with convex, finely punctate margin. Metepisternum almost flat, anterad narrowed, with inner margin impressed, convexly rounded in apical 1/3, oblique in anterior 2/3. Abdominal segments with microsculpture consisting of points. Lateral portion of 1st ventrite very finely and sparsely punctate, on median portion coarsely and rather densely punctate; metacoxal area 0.09 mm long, extended laterally only somewhat behind level of point of mesepimeron, its margin strongly convex, coarsely punctate. Tibia somewhat curved.

Sexual characters of male. Segments 1 and 2 of protarsi distinctly enlarged, segment 3 somewhat widened. Aedeagus (Figs 51 and 52) 0.37 mm long.

This species is characterized by the strongly developed articular process of the very slender and symmetric median lobe of the aedeagus. A similar condition is found in *politum* Macleay from Australia and *nanulum* Löbl from New Caledonia. *S. gracilendum* differs from them conspicuously by the elytral punctation which reminds that in species of the *imitator-subconvexum* group.

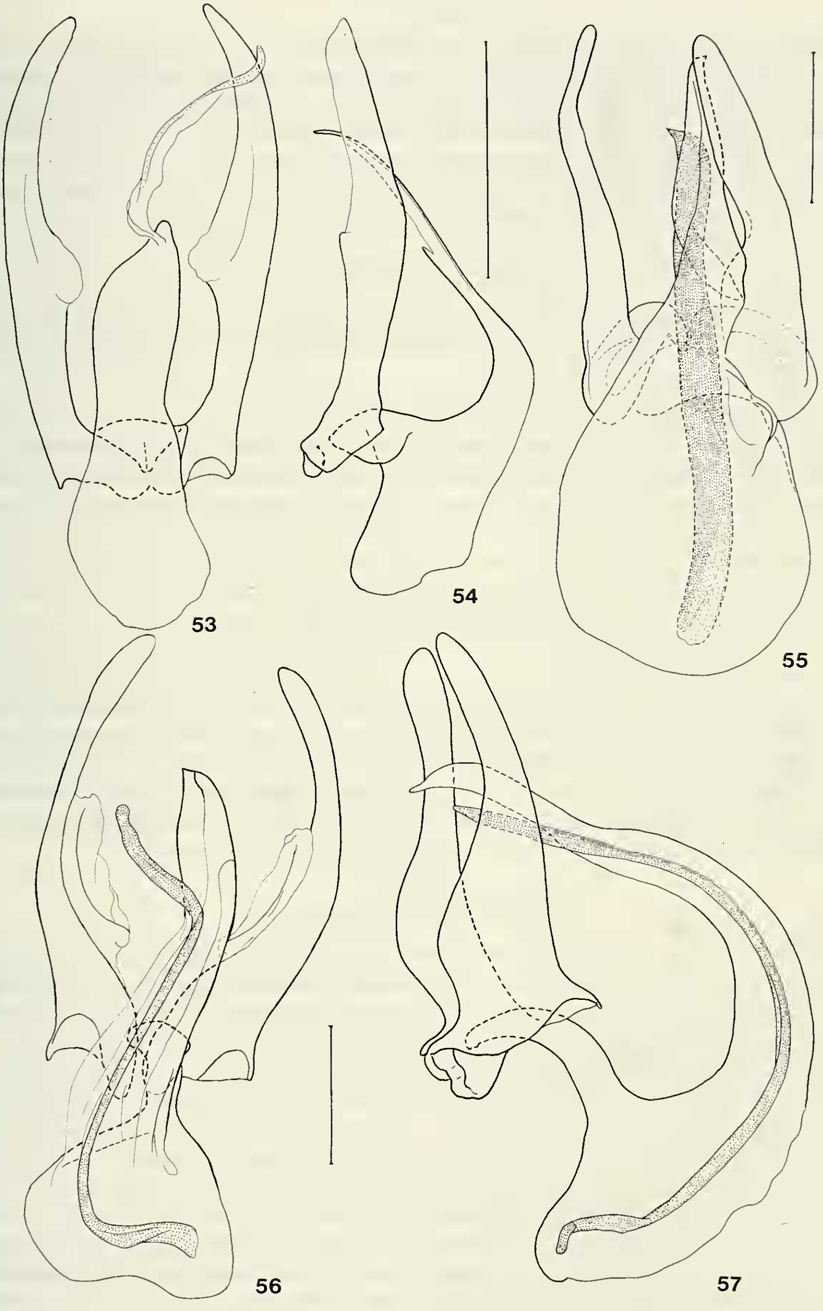
Scaphisoma cf. **minutissimum** Champion

Scaphisoma minutissimum Champion, 1927: 278.

Material examined: 12, Chantaburi, Khao Sabap Nat. Park, near Phliu Waterfalls, 150-300 m, 23-24.XI.85; 7, Khao Yai Nat. Park, near Headquarters, 750-850 m, 26.XI.-3.XII.85 (MHNG).

Distribution: India, Thailand. — New to Thailand.

Remarks. The Thai specimens are decidedly darker than the Indian ones and exhibit notable variability in the size of the body (length 0.72-0.95 mm, width 0.52-0.67 mm, aedeagus 0.20-0.27 mm long) and in the length of the antennomeres, especially that of the 4th which is about 1.5-2× longer than the minute 3rd one. The species is relatively flat, the antennomere V is longer than III and IV together, the elytron in basal 1/3 to 1/2 about as finely punctate as the pronotum, near apex coarser punctate that the latter, the sutural



FIGS 53 to 57.

53 and 54. *Scaphisoma lepidum* sp. n., holotype, aedeagus; 55. *Scaphisoma mirandum* sp. n., holotype, aedeagus; 56 and 57. *Scaphisoma agile* sp. n., paratype from Doi Suthep, aedeagus. Scale = 0.1 mm.

stria fine, somewhat curved at base, not extended along basal margin, and the lateral keel in dorsal view distinct. The margins of the meso- and metacoxal areas are rounded, the inner margin of the metepisternum is usually somewhat concave; the abdominal segments lack microsculpture (180× magnification). The median lobe of the aedeagus has a well developed articular process and very slender distal portion.

The species is very similar to *sadang* Löbl from which it differs by longer antennomere IV and larger metacoxal areas.

Scaphisoma lepidum sp. n.

Holotype ♂: Khao Yai Nat. Park, near Headquarters, 750-850 m, 26.XI.-3.XII.85 (MHNG).

Paratypes: 1 ♀ as holotype; 2 ♂, 6 ♀, Chanthaburi, Khao Sabap Nat. Park, near Phliu Waterfalls, 150-300 m, 23-24.XI.85 (MHNG).

Length 1.05-1.15 mm, width 0.75-0.83 mm. Body very dark reddish brown to blackish, abdomen as body or paler, with yellowish apex, femora and tibiae ochreous, tarsi and antennae yellowish. Most diagnostic characters as in *imitator* Löbl from which it differs in having antennal segment IV usually somewhat longer (relative length of antennomeres in holotype: III 4, IV 6, V 12, VI 15, VII 21, VIII 14, IX 19, X 19, XI 26); mesocoxal area 0.05-0.06 mm long; metasternum with two deep medio-apical impressions and several coarse punctures in an arround them; metacoxal areas 0.07-0.09 mm long, surface between them densely and rather coarsely punctate; aedeagus (Figs 53 and 54) 0.23-0.26 mm long, median lobe rather wide, not tapering, with obtuse point; parameres bearing inner membranous lobe.

Remarks. Three derived characters link this species with *subconvexum* (Pic), *murutum* Löbl, *imitator* Löbl, *mimicum* Löbl: short antennomere IV, irregular elytral punctation, and obsolete mesepimera. Besides, these species share small-sized body, sutural striae of elytra not extended along the basal margin, relatively large meso- and metacoxal areas, abdominal microsculpture consisting of points, and slender aedeagus. All these features are found also in other species but not in combination.

Scaphisoma mirandum sp. n.

Holotype ♂: Khao Yai Nat. Park, near Headquarters, 750-850 m, 26.XI.-3.XII.85 (MHNG).

Length 1.4 mm, width 0.90 mm. Body and femora ochreous, apex of abdomen, tibiae, tarsi and antennae paler than body, almost yellowish. Antennae long, relative length of antennomeres: III 8, IV 15, V 20, VI 22, VII 28, VIII 24, IX 29, X 29, XI 30; IV slender, about 5× longer than wide, V somewhat wider than IV, almost 6× longer than wide; VI markedly wider than V, well 4× longer than wide; VII 4× longer than wide; VIII barely wider than VI, about 4× longer than wide; XI somewhat wider than VII, about 4× longer than wide. Pronotum with lateral margins moderately and regularly rounded; lateral keels visible in dorsal view only near base; punctation sparse and very fine, almost obsolete at 24× magnification. Point of scutellum exposed. Elytra moderately narrowed apically; lateral margin moderately rounded; lateral keel in dorsal view visible from base to apex; apical margin truncate; inner apical angle lying somewhat behind level of outer angles; sutural margin elevated; sutural stria deep, curved externally at base and extended laterally, at humeral area narrowed to basal margin and joint with lateral stria; interval between sutural margin and stria flat, densely and rather finely punctate; discal punctation dense, coarse, punctures relatively well delimitated, about as large or somewhat smaller than intervals, only near apical margin much smaller. Punctation on pygidium extremely fine. Mesepimeron longer than interval between its top and mesocoxa. Metasternum all over extremely finely punctate (200×), median portion moderately convex, with two deep foveiform apical impressions. Mesocoxal area small, almost parallel, about 0.03 mm long, marginal punctures coarse, few coarse punctures extended laterally along anterior margin of metasternum. Metepisternum somewhat convex, 0.11 mm wide, somewhat narrowed anterad, inner margin impressed, convexly rounded at anterior angle and in apical 1/4. Ventrites very finely punctate, except for several coarse punctures in middle of basal margin of 1st ventrite, latter not microsculptured. Metacoxal area large, 0.12 mm long, subtriangular, with inner margin oblique and coarsely punctate, outer margin almost perpendicular to base and impunctate. Following ventrites and visible tergites with microsculpture consisting of points. Tibiae slender and straight.

Sexual characters of male. Segments 1-3 of protarsi moderately enlarged. Lobe of 6th ventrite very small, 0.05 mm long, pointed. Aedeagus (Fig. 55) 0.42 mm long.

This species may be readily distinguished from other *Scaphisoma* of similar size and colour by joint sutural and lateral striae at elytral base, unusual shape of the metacoxal area, and shape of the aedeagus.

Scaphisoma maindroni Achard

Scaphosoma maindroni Achard, 1920*e*: 240.
Scaphosoma mutatum Champion, 1927: 276.
Scaphisoma maindroni; LÖBL 1979*a*: 102; 1986*a*: 151; 1986*c*: 346.

Material examined: 2, Chiang Mai, Doi Suthep, 890 and 1180 m, pit-fall trap, IV. and VIII. 86 (Schwendinger); 1, Doi Inthanon, 910 m, 23.II.87 (Schwendinger); 11, Chiang Rai, ca 30 km E Chiang Rai, 12.III.82 (Rougemont) (all MHNG).

Distribution: Pakistan, India, Burma, Thailand, Vietnam, China.

Scaphisoma unicolor Achard

Scaphosoma unicolor Achard, 1923: 113.
Scaphisoma unicolor; LÖBL 1970: 772; 1980: 110.

Material examined: 2, Chiang Mai, Doi Suthep, 1500 m, 11.XI.85 (Schwendinger) (MHNG).

Distribution: Japan, Taiwan, Thailand. — New to Thailand.

Remarks. The size of the body varies more than stated in LÖBL, 1970. The largest specimens are 1.80-1.85 long.

Scaphisoma brunneonotatum Pic

Scaphosoma brunneonotatum Pic, 1923*a*: 17.
Scaphisoma brunneonotatum Löbl, 1980: 110; 1982*c*: 105.

Material examined: 2, Chiang Mai, Doi Suthep, 890 and 1180 m, II. and IV.86, pit-fall trap (Schwendinger) 21, Khao Yai Nat. Park, near Headquarters, 750-850 m, 26.XI.-3.XII.85; 1, Phetchaburi, Kaeng Krachan Nat. Park, 300-400 m, 25-30 km from Headquarters, 17.XI.85 (all MHNG).

Distribution: Thailand, Vietnam, Taiwan, Japan (Ryukyu's).

Scaphisoma agile sp. n.

Holotype ♂: Chiang Mai, Doi Suthep, 1180 m, pit-fall trap, III.86 (Schwendinger) (MHNG).

Paratypes: 10♂, 2♀, as holotype, I. to VI.86; 2♂, 2♀, same data but 1100 m, IV.86; 10♂, 5♀, same but 970 m, III.97; 2♂, 2♀, same but 960 m, III.86; 1♂, 3♀, same but 950 m, VI. and VIII.86; 28♂, 15♀, 12 specimens, same but 890 m, III. and IV.86 (all MHNG).

Length 1.2-1.5 mm, width 0.85-1.10 mm. Body rather pale reddish brown, apical portion of elytra, apex of abdomen, legs and antennae paler, ochreous to yellowish. Very similar to *brunneonotatum* with which it shares most of the external characters. In *agile* the body is in average larger, besides the punctation is denser and more distinct on the apical third of elytron, on the median portion of the metasternum, and in male on the mediobasal portion of the 1st ventrite. The meso- and metacoxal areas are larger, 0.06-0.09 mm and 0.05-0.06 mm long respectively, and the shape of the median lobe of the aedeagus (Figs 56 and 57) is characteristic.

In *agile* the distal portion of the median lobe is sinuate in lateral view, while it is almost evenly curved in *brunneonotatum* and *besucheti*. These three species share a curved, conspicuously long articular process of the median lobe, the same shape of the parameres and most of the external characters. *S. agile* is uneasy to separate form *brunneonotatum* if aedeagus not examined. From *besucheti* it may be distinguished by finer elytral punctation.

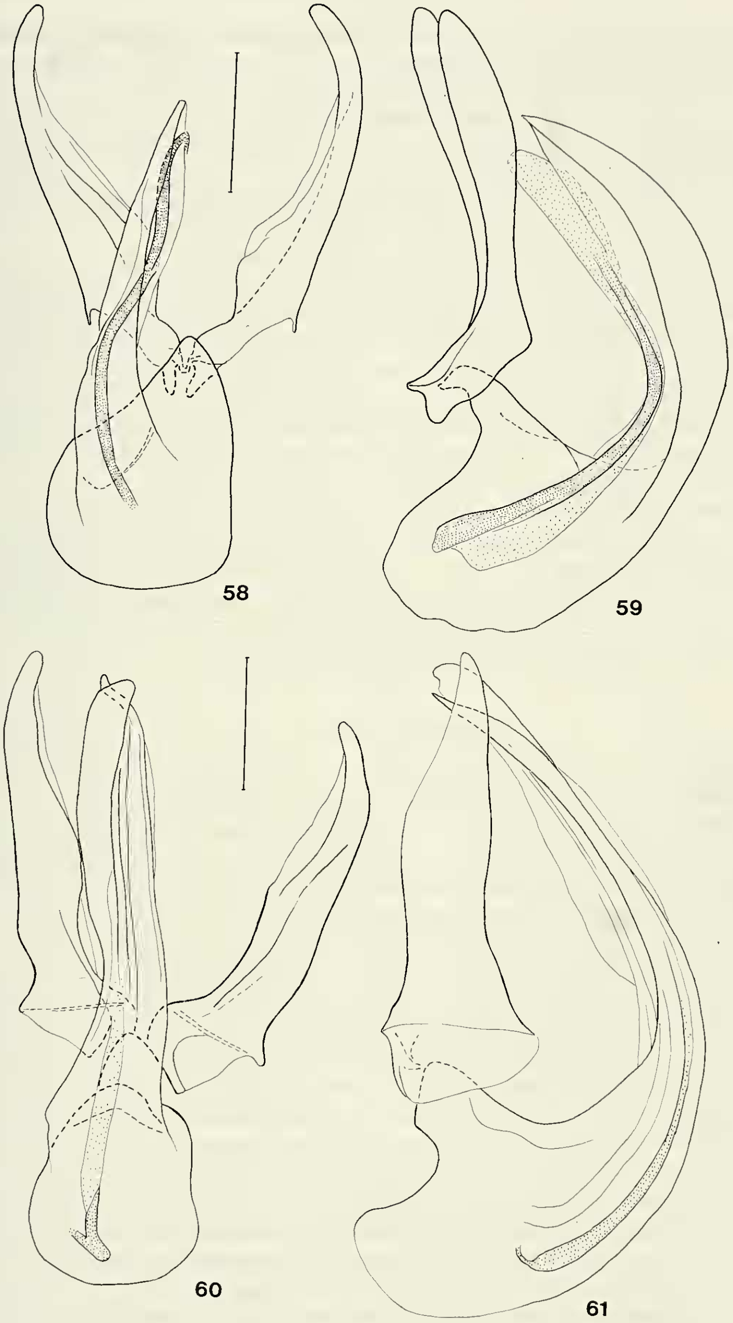
Scaphisoma suthepense sp. n.

Holotype ♂: Chiang Mai, Doi Suthep, 1180 m, III.86, pit-fall trap (Schwendinger) (MHNG).

Paratypes: 10♂, 5♀, as holotype, but II.-IX.86 and 87; 1♀, Chiang Mai, Doi Pui, north slope, 1500 m, 19.XII.88 (Trautner & Geigenmüller); 1♂, Chiang Mai, Doi Angkhang, 10 km W Fang, 1500 m, 20.III.67 (Schwendinger) (MHNG, SMNS).

Length 1.6-1.8 mm, width 1.12-1.30 mm. Body very dark reddish brown to black, apex of abdomen, legs and antennae paler. Antennae fairly long, relative length of antennomeres: III 5, IV 15, V 19, VI 17, VII 23, VIII 15, IX 23, X 22, XI 26 (holotype). Very similar to *spurium* Löbl, with following combination of diagnostic characters: Pronotum very finely punctate. Point of scutellum exposed. Sutural stria of elytron curved and extended along base about to middle of basal width. Elytral punctation dense and rather coarse, much coarser than that on pronotum, except for finely punctate surface near sutural stria. Mesepimeron about as long as interval between its end and mesocoxa. Metasternum very densely and rather coarsely punctate on median area, elsewhere sparsely and very finely punctate. Mesocoxal area large, subtriangular, 0.08-0.11 mm long, with impunctate margines. Metepisternum 0.14-0.15 mm wide, narrowed anteriorly, inner margin impressed, straight, apically rounded. First ventrite not microsculptured, medially with relatively dense and distinct setiferous punctures, elsewhere very finely and sparsely punctate. Metacoxal area 0.05-0.07 mm long, with coarse marginal punctures. Following ventrites with microsculpture consisting of extremely fine points. Aedeagus (Figs 58 and 59) 0.40-0.48 mm long.

This species may be separated from *spurium* by longer sutural striae, the metepisternite impressed along the inner suture, the shorter metacoxal area, the less distinct abdominal microsculpture, and in males by sparser punctation on median portion of the 1st ventrite and by the shape of the parameres and median lobe of the aedeagus. Females in *suthepense* exhibit very finely and sparsely punctate 1st ventrite (medially and laterally) while in *spurium* the median portion of the 1st ventrite is very densely punctate (however, much finer than in male).



FIGS 58 to 61.

58 and 59. *Scaphisoma suthepense* sp. n., paratype from Doi Suthep, aedeagus; 60 and 61. *Scaphisoma nietneri* Löbl from Kaeng Krachan Nat. Park, aedeagus. Scale = 0.1 mm.

Both species differ notably by the shape of the parameres in lateral view (in *spurium* from the wide base gradually narrowed).

Scaphisoma nietneri Löbl

Scaphisoma nietneri Löbl, 1971: 969.

Material examined: 23, Phetchaburi, Kaeng Krachan Nat. Park, 20-25 km from Headquarters, 300-400 m, 17.XI.85; 1, Keng So Pa, 23.XII.79 (Rougemont) (all MHNG).

Distribution: Sri Lanka, Thailand — New to Thailand.

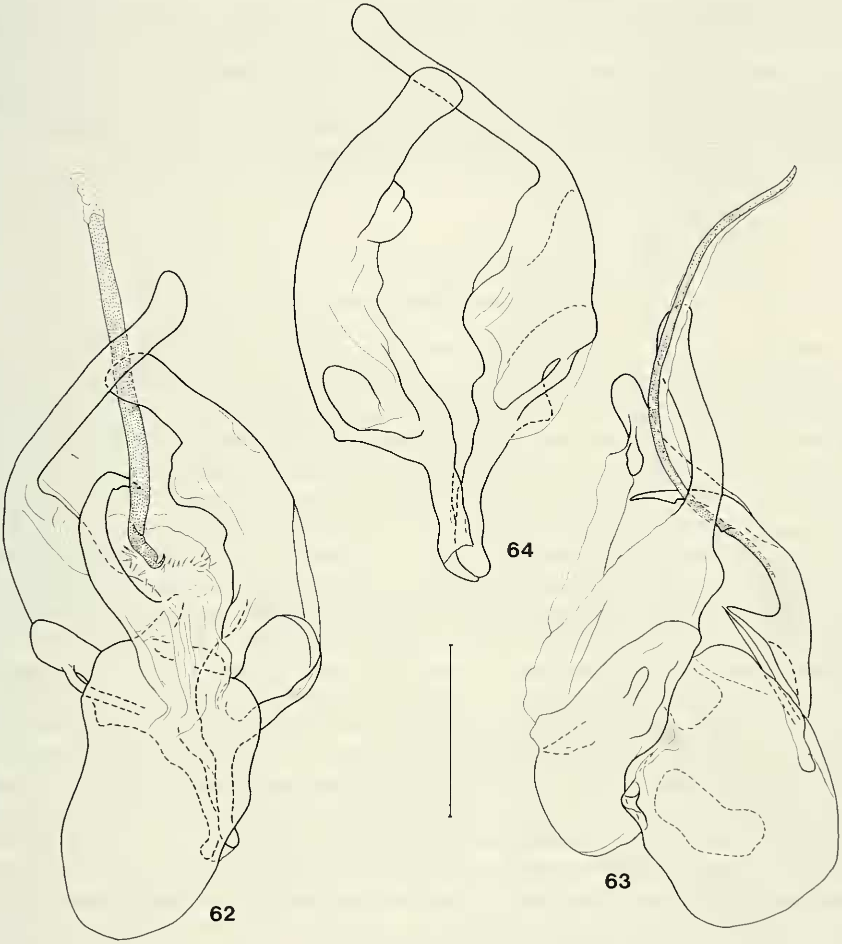
Remarks. The length of the body varies more than stated in the description (from 1.4 to 1.7 mm), which is to be completed by following characters: mesepimeron somewhat longer than interval between its end and mesocoxa; metasternum in both sexes all over very finely punctate, without erected setae on median portion; mesocoxal area 0.06-0.09 mm long, strongly convex to subtriangular, with impunctate margin; 1st ventrite all over very finely punctate, except for coarse punctures at margin of metacoxal area; latter distinctly convex, 0.04-0.06 mm long, markedly shorter that mesocoxal area; following ventrites with extremely fine microsculpture consisting of points.

The aedeagus is 0.44-0.52 mm long, the parameres have a membranous inner margin (Figs 60 and 61), not enlarged as figured in LÖBL (l.c.). I have now dissected 13 males from the Thai collections and a further male from Sri Lanka. In all these specimens the parameres are apically narrowed, but the contures are sometimes rather obsolete. The incorrect figure in LÖBL (1971) is obviously due to a fragment of an intersegmental membrane mistaken for the inner apical part of the paramere.

Scaphisoma fastum sp. n.

Holotype ♂: Chiang Mai, Chiang Dao, 450 m, 5-11.IV.58 (Maa) in a dead tree (BBMH). Paratypes: 1♂ as holotype; 1♂ "Chiang Mai, V.74" (Sedlacek) (MHNG).

Length 1.5-1.6 mm width 1.05-1.17 mm. Body more or less dark reddish brown, apex of elytra darkened. Apical abdominal segments, legs and antennae ochreous to yellowish. Antennae long, relative length of antennomeres: III 5, IV 10, V 19, VI 19, VII 27, VIII 17, IX 28, X 25, XI 30 (holotype); segment IV about 2.5× longer than wide, V barely wider than IV, almost 5× longer than wide; VI somewhat wider than V, about 4× longer than wide; VII about 4.5× longer than wide; VIII slightly wider than VI, about 3.5× longer than wide; XI about as wide as VII and 5× longer than wide. Pronotum with lateral margins rounded and lateral keels in dorsal view visible in basal half; punctation dense, more or less fine, at least some punctures distinct at 12× magnification. Point of scutellum exposed. Elytra laterally fairly rounded, apically strongly narrowed; lateral keel visible in dorsal view from base to apex; apical margin somewhat convex; inner apical angle about in same level as outer angles; sutural margin not or somewhat elevated; sutural stria rather shallow, curved at base and extended laterally to humeral area, not joint with lateral stria; interval between sutural stria and sutural margin flat, with a row of fine punctures; punctation dense (sparser than on pronotum) and fine, punctures shallow and not well delimited, usually somewhat larger than pronotal ones and at least somewhat smaller than intervals between them. Pygidium densely and very finely punctate, with microsculpture consisting of punctures. Mesepimeron slender, shorter than interval between its end and mesocoxa. Metasternum very finely punctate, medially moderately convex, without distinct impressions. Mesocoxal area narrow, 0.03 mm long, with parallel, coarsely punctate margin, few coarse punctures extended laterally along metasternal suture. Metepisternum almost flat, at widest point 0.13 mm wide, narrowed anterad, inner margin not impressed, straight. First ventrite very finely and densely punctate, except for coarse punctures at margins of metacoxal areas and along basal margin between coxae, not microsculptured. Coxal area 0.05-0.06 mm long, rounded. Following ventrites with microsculpture consisting of punctures. Tibiae straight and slender.



FIGS 62 to 64.

62. *Scaphisoma fastum* sp. n., holotype, aedeagus, dorsal view; 63. dtto, lateral view; 64. dtto, parameres, ventral view. Scale = 0.2 mm.

Sexual characters of male. Segments 1-3 of protarsi somewhat enlarged. Aedeagus (Figs 62 to 64) 0.66-0.73 mm long.

This new species is closely related to *ruficolor* (Pic) with which it shares most of the external characters, including the conspicuous row of coarse punctures on the base of the

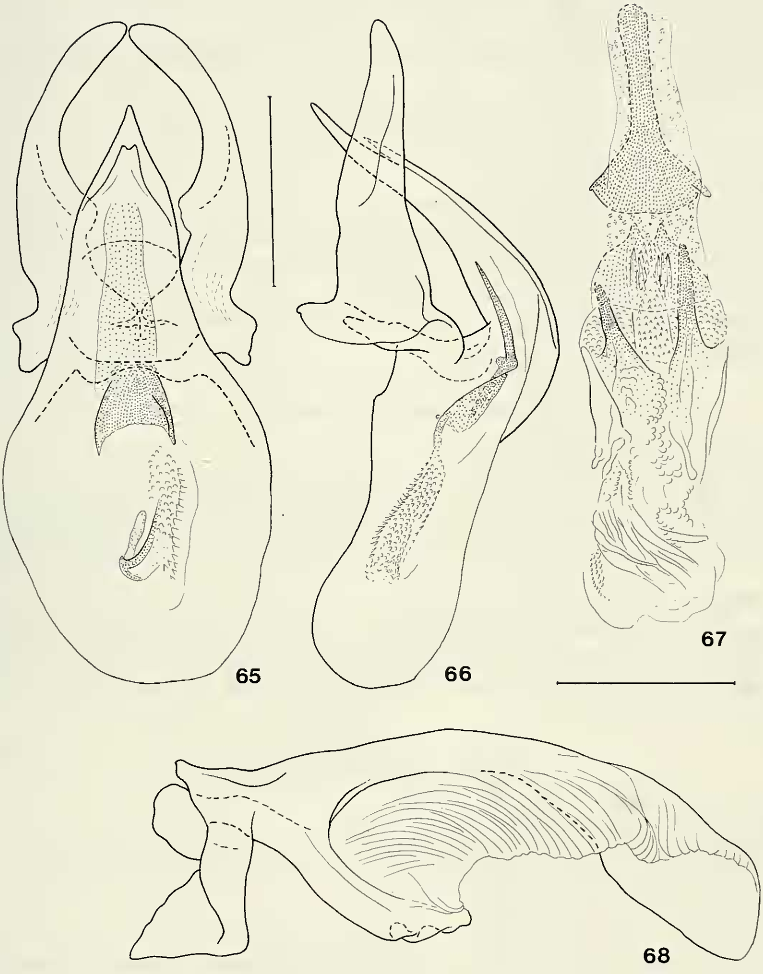
1st ventrite, and a very similar aedeagus. However, the parameres provide good distinguishing features. In *fastum* the distal portion of the right paramere is much slender than in *ruficolor,* and the left paramere bears a membranous subapical lobe absent from *ruficolor*. Similar aedeagi as in *ruficolor* and *fastum* are found in *anomalum* Löbl and *ramosum* Löbl from the Philippines and in *blandum* Löbl from New Guinea. These species are characterized by following synapomorphies: median lobe asymmetrical, with large basal bulbous part and hook-like distal part bearing a ventral tubercle; internal sac with a sclerotized flagellum; parameres asymmetrical, enlarged, with narrow elongate basal portion, and narrowed apical portion of the right paramere; articular tubercle moderately developed. In *anomalum, ramosum* and *blandum* the sutural stria of elytron is not extended along basal margin. Besides, these species differ also in the shape of the parameres, and *blandum* may be readily distinguished by its colour pattern.

Scaphisoma canaliculatum sp. n.

Holotype ♂: Pradu Pah, 50 km N Lampang, 620 m, 18.I.86 (Schwendinger) (MHNG).

Length 1.85 mm, width 1.20 mm. Dorsal surface very dark, almost black, except for reddish brown to ochreous abdomen, dark reddish brown ventral surface, femora and tibiae, and pale tarsi and antennae. Antennae long, relative length of segments: III 6, IV 12, V 18, VI 17, VII 24, VIII 17, IX 25, X 25, XI 34; segment IV slender, about 3 × longer than wide; V wider than IV, 4 × longer than wide; VI markedly wider than V, 3 × longer than wide; VII about 3.5 × longer than wide, wider than VI; VIII about as VI; XI about as wide as VII, almost 5 × longer than wide. Pronotum with strongly rounded lateral margins; lateral keels not visible in dorsal view; punctation very fine, barely visible at 50 × magnification. Point of scutellum exposed. Elytra apically fairly narrowed; lateral margin almost regularly rounded; lateral keel not visible in dorsal view; apical margin truncate; inner apical angle lying behind level of outer angle; sutural margin not elevated; sutural stria deep, parallel to sutural margin, curved at base and extended along basal margin about to middle of basal width; interval between sutural margin and stria narrow, flat, densely and finely punctate; punctation dense and rather coarse, with well delimited punctures usually distinctly smaller than intervals between them; humeral area very finely punctate; surface near apical margin denser punctate than elsewhere. Pygidium apparently lacking microsculpture, punctation dense and rather fine near base, very fine apically. Mesepimeron small, about as long as half of interval between its end and mesocoxa. Metasternum all over very finely and sparsely punctate; median portion somewhat convex, lacking apical impressions. Mesocoxal area very narrow, about 0.03 mm long, with fine marginal punctures. Metepisternum somewhat convex, 0.13 mm wide, anterad narrowed, inner margin straight, impressed below level of metasternum margin. First ventrite not microsculptured, with a dense basal row of coarse elongate punctures margining lateral portion of base and metacoxal area, punctation behind that row and on center rather sparse and fine, near apical margin very fine. Metacoxal area very small, 0.03 mm long, with somewhat convex margin. Following ventrites with well visible microsculpture (24 ×) consisting of punctures. Tibiae slender, straight.

Sexual characters of male. Segments 1-3 of protarsi strongly enlarged, 1 and 2 of mesotarsi moderately enlarged. Apical margin of 5th ventrite sinuate. Lobe of 6th ventrite 0.06 mm long, broadly rounded. Aedeagus (Figs 65 and 66) 0.67 mm long.



FIGS 65 to 68.

65 and 66. *Scaphisoma canaliculatum* sp. n., holotype, aedeagus; 67. *Scaphisoma atronotatum* Pic from Kalew, Burma, internal sac; 68. dtto, paramere. Scale = 0.2 mm.

This species belongs to the *pictum* group as shown by the structure of the median lobe of the aedeagus. It differs drastically from other members of that group in the shape of the sclerites of the internal sac. Besides, it is well characterized by the combination of the external features, especially by the colour pattern, the small coxal areas, the abdominal punctation and the microsculpture.

Scaphisoma jacobsoni Löbl

Scaphisoma jacobsoni Löbl, 1975: 287.

Material examined: 2, Chanthaburi, Khao Sabap Nat. Park, 150-300 m, 23.-24.XI.85; 3, Phuket, island Phuket, hills near Surin Beach, 1.-6.XI.87 (Heiss) (all MHNG).

Distribution: Thailand, Malaysia (Sarawak, Penang), Indonesia (Java, Sumatra). — New to Thailand.

Scaphisoma dohertyi Pic

Scaphosoma dohertyi Pic, 1915*a*: 24.
Scaphisoma dohertyi; Löbl 1981*c*: 107, 1986*a*: 174.

Material examined: 7, Chanthaburi, Khao Sabap Nat. Park, 150-300 m, 23.-24.XI.85; 4, Kanchanaburi, Sai York Nat. Park, 100 m, 21.VII.87 (Schwendinger); 1, Phuket, island Phuket, hills near Surin Beach, 1.-6.XI.87 (Heiss) (all MHNG).

Distribution: Indonesia (Java), Malaysia (Pahang, Sarawak), Vietnam, Thailand, North India.

Scaphisoma binhanum (Pic)

Pseudoscaphosoma binhanum Pic, 1922: 2.
Scaphisoma binhanum; Löbl 1976: 222, 1979*a*: 108, 1981*c*: 106, 1986*a*: 174.

Material examined: 1, Mae Hong Son, Tham Lok Forest Reserve, 8 km N Sop Pong, 700 m, 11 & 13.XI.85; 8, Chanthaburi, Khao Sabap Nat. Park, near Phliu Waterfalls, 150-300 m, 23.-24.XI.85; 6, Phuket, island Phuket, hills near Surin Beach, 1.-6.XI.87 (Heiss) (all MHNG).

Distribution: India, Thailand, Vietnam, Indonesia (Java). — New to Thailand.

Remarks. The proximally expanded apical portion of the parameres and 1st ventrite in male lacking apical teeth distinguish *binhanum* from *dohertyi*. The female in these two species may be separated by the shape of the sutural striae of elytra, and by the elytral punctation.

Scaphisoma atronotatum Pic

Scaphosoma atronotatum Pic, 1920*c*: 24; 1921*a*: 165.
Scaphisoma atronotatum; Löbl 1973*a*: 152.

Material examined: 5, Chiang Mai, Doi Suthep, 1500 m, 11.XI.86 (Schwendinger); 5, Doi Inthanon, 7.XI.85, 1720 m (all MHNG).

Distribution: Burma, Thailand. — New to Thailand.

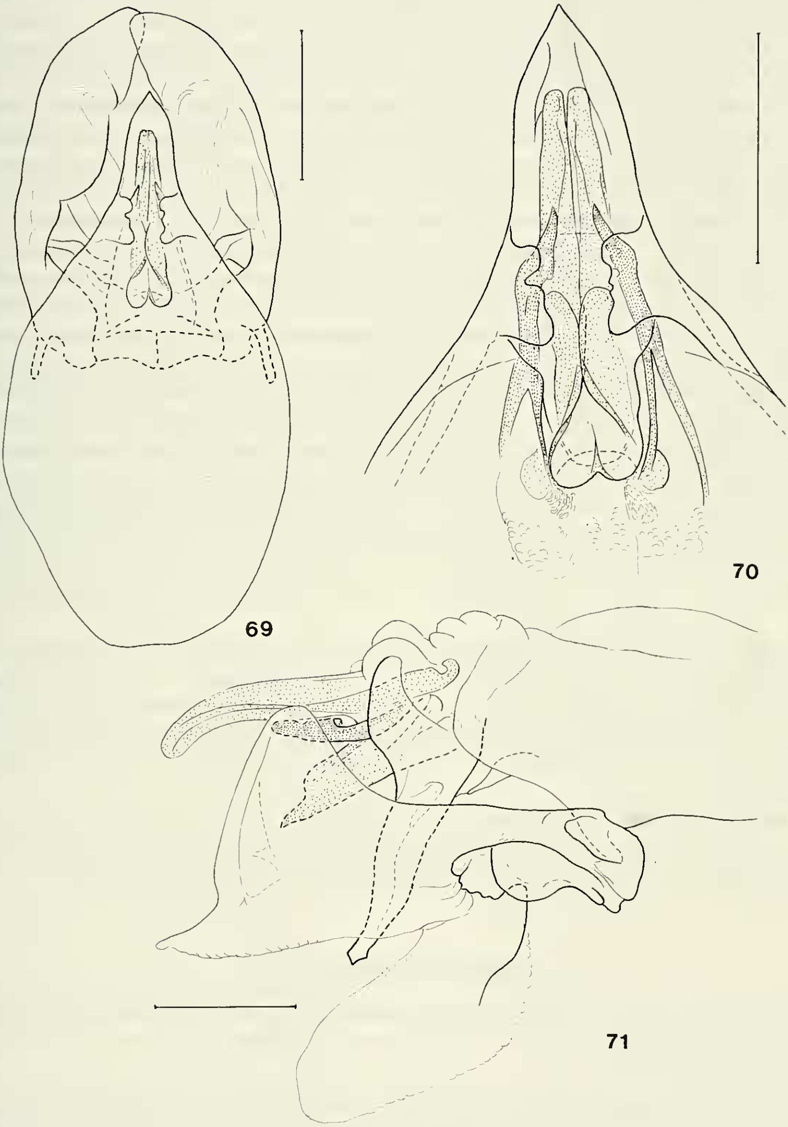
Remarks. New material enables to complete the published figures of the aedeagus by more details (Figs 67 and 68). The parameres are post-basally enlarged and have strongly sclerotized inner margin, similar to that in *khasianum* Löbl and *surya* Löbl, but the dorso-apical wall of the bulbous part of the median lobe is expanded and overlapping the distal portion, as in *dohertyi* and *binhanum*.

Scaphisoma operosum sp. n.

Holotype ♂: Malaysia, Cameron Highlands, 22.-30.III.84 (Rougemont) (MHNG).

Paratypes: 1♂, as holotype; 4♂, 5♀, Thailand, Chiang Mai, Doi Chiang Dao, 450 m, 7.V.87 (Schwendinger) (all MHNG).

Length 1.7-2.0 mm, width 1.15-1.35 mm. Body reddish brown, elytra at apex usually paler, apex of abdomen and legs pale reddish brown or ochreous, antennae yellowish.



FIGS 69 to 71.

69. *Scaphisoma operosum* sp. n., holotype, aedeagus; 70. dtto, distal portion of median lobe; 71. dtto, paratype from Doi Chiang Dao, distal portion of median lobe in lateral view, with paramere, internal sac extruded. Scale = 0.3 mm (69) and 0.2 mm (70, 71).

Antennae long, segments very slender, their relative length as: III 7, IV 21, V 33, VI 28, VII 30, VIII 22, IX 29, X 26, XI 34 (holotype); V and VI evenly wide, slightly wider than IV, VI 7× longer than wide, VIII only somewhat wider than VI. Pronotum with somewhat rounded lateral margins; lateral keels in dorsal view not or barely visible; punctation rather dense and fine, distinct at 20× magnification, punctures weel delimited, near base coarser than on center. Point of scutellum exposed. Elytron slightly narrowed apically; lateral margin distinctly rounded; lateral keel in dorsal view exposed from base to apex, apical margin somewhat rounded; inner apical angle lying in same level as outer angle; sutural margin not elevated; sutural stria shallow, parallel to margin, barely curved near base; interval between latter and suture flat, with a row of fine or very fine puncture; discal punctation dense and more or less coarse, punctures rather well delimited, often larger than intervals between them (in holotype decidedly smaller), near base similar as on center. Pygidium very finely and sparsely punctate, as ventrites with microsculpture consisting of transverse lines. Mesepimeron about 1.5× longer than interval between its end and mesocoxa. Metasternum convex between mesocoxae, with medio-apical portion flattened and impressed, and more or less distinctly impressed median line; covered with microsculpture, except on anterolateral portion; punctation almost all over sparse and very fine, on a more or less extended medio-apical area punctures dense and relatively coarse, and with a dense transverse row of coarse punctures in an impressed stria in front of metacoxa. Mesocoxal area 0.06-0.07 mm long, margin rounded and distinctly punctate. Metepisternum flat, 0.14-0.18 mm wide, anterad narrowed, inner margin impressed, straight, except near angles. First ventrite sparsely and very finely punctate, on mediobasal area several punctures coarser. Metacoxal area 0.08-0.11 mm long, with convex, rather coarsely punctate margin. Tibiae slender, I straight, II and III somewhat curved in apical third.

Sexual characters of male. Segments 1 and 2 of protarsi and mesotarsi strongly enlarged (1st segment about as large as apex of tibia), segment 3 of pro- and mesotarsi moderately enlarged. Fifth ventrite with two short apical ridges each bearing a long hair, surface between them flattened and somewhat impressed; apical lobe of 6th ventrite wide and short, 0.04-0.05 mm long, with rounded margin. Aedeagus (Figs 69 to 71) 1.07-1.35 mm long.

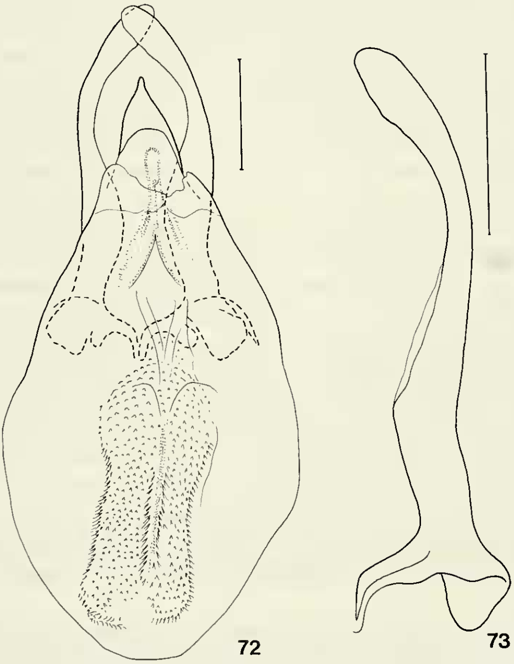
This new species is closely related to *laminatum* Löbl with which it shares a similar median lobe. It may be readily distinguished by the impressed center of metasternum and by the shape of the parameres which are not dorsally dilated in *laminatum*.

Scaphisoma lannaense sp. n.

Holotype ♂: Khao Yai Nat. Park, near Headquarters, 750-850 m, 26.XI.-3.XIII.85 (MHNG).

Paratypes: 1♂, 3♀, as holotype; 1♀, Chanthaburi, Khao Sabap Nat. Park, 150-300 m, 23.-24.XI.85 (all MHNG).

Length 1.4-1.6 mm, width 0.97-1.10 mm. Head, pronotum, and hypomera ochreous. Elytra blackish, each with a large reddish post-basal spot and reddish to yellowish on apical 1/5 to 1/3. Ventral surface of thorax dark reddish brown to blackish, 1st ventrite more or less darkened, following ventrites ochreous, abdominal apex yellowish. Legs ochreous, antennae yellowish, long. Relative length of antennomeres: III 7, IV 17, V 25, VI 21, VII 28, VIII 24, IX 31, X 28, XI 36 (holotype). Pronotum with moderately rounded lateral margins, lateral keels not visible in dorsal view; punctation rather coarse and very dense near base (especially on mediobasal area), with most punctures much larger than intervals and distinct at 20× magnification; elsewhere pronotal punctation finer and less dense, consisting of punctures usually smaller than intervals and almost indistinct at 20× magnification. Distal portion of scutellum exposed. Elytra moderately narrowed apically; lateral margin moderately rounded; lateral keels well visible from base to apex in dorsal view; apical margin rounded; inner apical angle lying in same level as outer angle; sutural margin elevated; sutural stria deep, fairly divergent anterad, suddenly curved obliquely towards basal margin, somewhat behind level of scutellum, accompanied with a row of coarse punctures (becoming fine to very fine apically); interval between sutural stria and margin impressed, with two rows of coarse punctures (one row apically); discal punctation rather sparse and very fine, consisting of extremely shallow punctures, punctures near sutural stria coarse. Pygidium very finely punctate. Mesepimeron slender, about 2× longer than interval between its top and mesocoxa. Metasternum between meso- and metacoxae with microsculpture consisting of transverse striae; punctation all over very fine, except for few moderately coarse punctures in front of apical intercoxal process; with two deep medio-apical impressions. Mesocoxal area narrow, 0.03-0.04 mm long, parallel, with coarse marginal punctures. Metepisternum convex, 0.14-0.15 mm wide, anterad narrowed, inner margin impressed, convexly rounded in apical 2/3 and with convex anterior angle. Abdominal segments with microsculpture consisting of transverse lines. First ventrite very finely punctate, just behind intercoxal process a few relatively coarse punctures. Metacoxal area 0.04-0.06 mm long, convex, marginal punctures coarse. Tibiae slender, I and II curved, III straight.



FIGS 72 and 73.

72. *Scaphisoma lannaense* sp. n., holotype, aedeagus; 73. dtto, paramere. Scale = 0.1 mm.

Sexual characters of male. Segments 1 to 3 of protarsi somewhat enlarged. Sixth ventrite lacking apical lobe. Aedeagus (Figs 72 and 73) 0.53-0.59 mm long.

This species resembles *dohertyi* by the coloration, the conspicuous shape of the sutural stria of the elytron, and the elytral punctation. It may be readily separated from *dohertyi* by coarser pronotal punctation and by the metasternum lacking a row of punctures in front of the metacoxa. *S. lannaense* belongs to the *pictum* group (symmetrical aedeagus with bifid distal portion of the median lobe). It differs from all species placed in the group in the combination of following characters: elytron maculate, with sutural stria divergent anterad, and internal sac of aedeagus lacking sclerotized pieces.

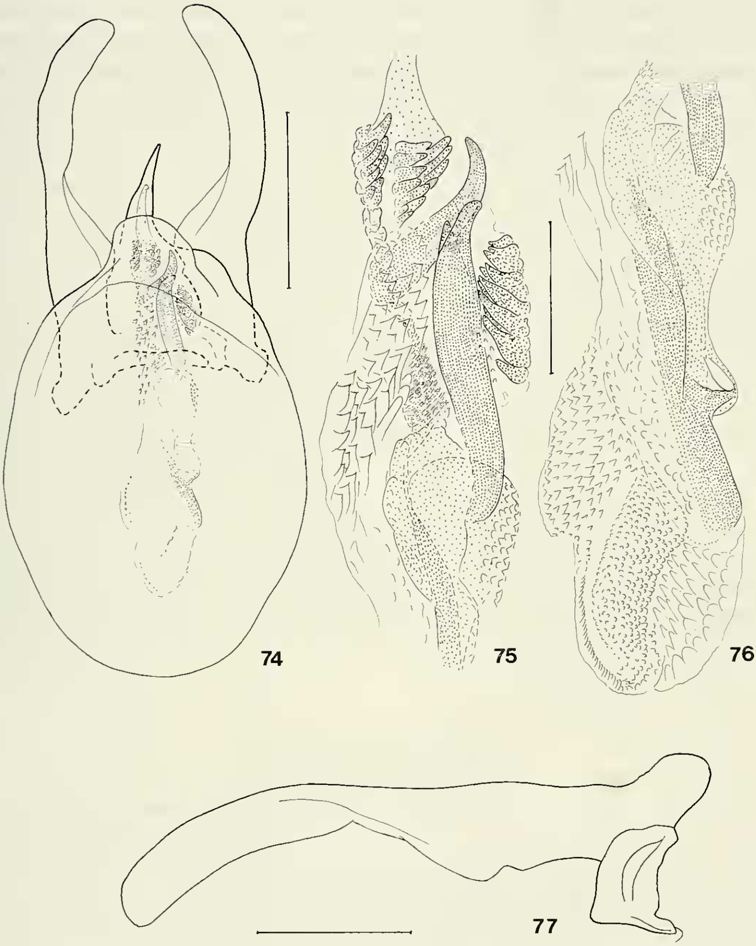
Scaphisoma velox sp. n.

Holotype ♂: Phetchaburi, Kaeng Krachan Nat. Park, 30 km from Headquarters, 450 m, 18.XI.85 (MHNG).

Length 2.0 mm, width 1.4 mm. Body ochreous, apical abdominal segments, legs and antennae paler, almost yellowish. Elytra weakly alutaceous, darkened at apex, and with a somewhat paler narrow transverse subapical area. Antennae long, relative length of antennomeres as III 7, IV 22, V 32, VI 29, VII 35, VIII 30, IX 35, X 32, XI 40; IV about 5 × longer than wide, V somewhat wider than IV, well 6 × longer than wide, VI slightly wider than V, not quite 6 × longer than wide, VII well 4 × longer than wide; VIII barely wider than VI, 5 × longer than wide; XI about as wide as VII, and about 4 × longer than wide. Pronotum with lateral margins oblique in basal half, rounded apically; lateral keels not visible in dorsal view; punctation dense and very fine, barely distinct at 24 × magnification. Point of scutellum exposed. Elytra with distinct pubescence; lateral margin rounded; lateral keel in dorsal view visible from base almost to apex; apical angle truncate; inner apical angle lying behind level of outer angle; sutural margin elevated; sutural stria deep, almost parallel to margin, somewhat curved near base, evanescent near pronotal lobe; interval between sutural stria and margin flat, densely and rather finely punctate; punctation dense and rather coarse, punctures well delimited, larger than intervals between them (especially near apex), at base decidedly finer than on center (but coarser than on pronotum); minute humeral hump impunctate. Pygidium extremely finely punctate, with microsculpture consisting of transverse striae. Mesepimeron about as long as interval between its end and mesocoxa. Metasternum with microsculpture consisting of transverse striae; median portion strongly convex, apically flattened, with fine and very dense punctation medio-apically (punctures about as large as intervals), sparsely and very finely punctate elsewhere, except for a dense row of rather coarse punctures in a deeply impressed line in front of metacoxa. Mesocoxal area 0.06 mm long, with rounded, rather coarsely punctate margin. Metepisternum convex, 0.15 mm wide, anterad moderately narrowed, inner margin deeply impressed, straight except near angles. Ventrites microsculptured as pygidium. First ventrite very finely and sparsely punctate, just on a small mediobasal area punctation distinctly denser and less fine; metacoxal area 0.12 mm long, with rounded margin coarsely punctate. Tibiae rather stout, I straight, II and III somewhat curved.

Sexual characters of male. Segments 1 and 2 of pro- and mesotarsi strongly enlarged, 1 about as large as apex of tibia; segment 3 of pro- and mesotarsi moderately enlarged. Lobe of 6th ventrite narrow, 0.10 mm long. Aedeagus (Figs 74 to 77) 0.55 mm long.

S. velox shares many external characters (microsculpture, long antennae, transverse row of punctures in front of metacoxa, elytron with sutural stria not extended along basal



FIGS 74 to 77.

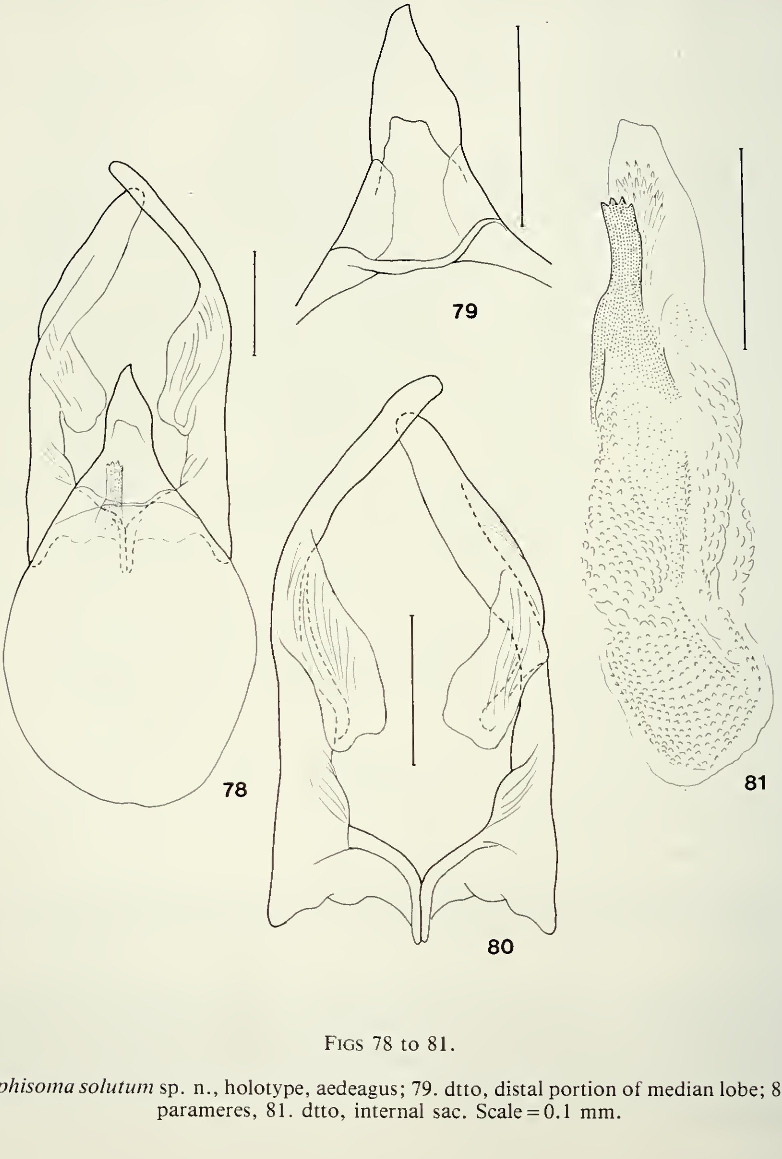
74. *Scaphisoma velox* sp. n., holotype, aedeagus; 75. dtto, distal portion of internal sac; 76. dtto, basal portion of internal sac; 77. dtto, paramere. Scale = 0.3 mm (74) and 0.1 mm (75-77).

margin) with species of the groups *pictum, binhanum, tricolor* and *haemorrhoidale.* But the aedeagus lacks the autapomorphies of these groups, and the median lobe differs in the shape of its apical portion. The species is also distinguishable by the complex internal sac and by alutaceous elytra. The asymmetry in the parameres as figured is possibly due to an artefact.

Scaphisoma solutum sp. n.

Holotype ♂: Chanthaburi, Khao Sabap Nat. Park, near Phliu Waterfalls, 150-300 m, 23.-24.XI.85 (MHNG).

Length 1.3 mm, width 0.83 mm. Body very dark reddish brown, apex of abdomen and femora ochreous. Antennae, tibiae and tarsi pale, almost yellowish. Antennae long, relative length of antennomeres: III 8, IV 10, V 19, VI 18, VII 22, VIII 18, IX 24, ×23, XI 28; III conspicuously elongate; IV slender, 3× longer than wide; V somewhat wider



Figs 78 to 81.

78. *Scaphisoma solutum* sp. n., holotype, aedeagus; 79. dtto, distal portion of median lobe; 80. dtto, parameres, 81. dtto, internal sac. Scale = 0.1 mm.

than IV, about 5× longer than wide; VI somewhat wider than V, about 4× longer than wide; VII wider than VI, not quite 4× longer than wide; VIII wider than VI, almost 4× longer than wide; XI barely wider than VII, more than 4× longer than wide. Pronotum with moderately rounded lateral margins and barely visible lateral keels in dorsal view; punctation dense and very fine, punctures well delimited and distinct at 20× magnification, much smaller than intervals between them. Point of scutellum exposed. Elytra fairly narrowed apically; lateral margin rounded in anterior half, oblique in apical half; lateral keel distinct from base to apex; apical margin truncate; inner apical angle lying in level of outer angle; sutural margin not elevated; sutural stria rather deep, parallel to suture, evanescent at level of scutellum; interval between sutural stria and margin flat, with a row of very fine punctures; discal punctation dense and fine, near base similar as that on pronotum, elsewhere somewhat coarser, with punctures well delimited, most of them smaller than intervals. Pygidium very finely punctate, with microsculpture consisting of transverse striae. Mesepimeron very slender, about 2× longer than interval between its top and mesocoxa. Metasternum all over very finely punctate; median portion convex, without impressions; microsculpture consisting of transverse striae distinct on median and lateroapical portions, absent from laterobasal area. Mesocoxal area barely 0.03 mm long, with almost parallel, distinctly punctate margin. Metepisternum flat, 0.08 mm wide, anterad moderately narrowed, with almost straight not impressed inner margin. Visibles ventrites as pygidium very finely punctate and microsculptured; metacoxal area 0.07 mm long, convex, with fine marginal punctures.

Sexual characters of male. Segments 1-2 of protarsi enlarged. Lobe of 6th ventrite wide and very short, almost indistinct. Aedeagus (Figs 78 to 81) 0.60 mm long.

This species exhibits rather unusual aedeagal characters. It seems to represent an isolated group possibly related to the *pictum*-group. Its most striking features are the asymmetrical distal portions of the parameres and of the median lobe and the large, not overlapped ostium.

Scaphisoma rouyeri Pic

Scaphosoma (Scutoscaphosoma) rouyeri Pic, 1916: 3.
Scutoscaphosoma subovatum Pic, 1920*c*: 24.
Scaphisoma rouyeri; LÖBL 1981*b*: 156.

Material examined: 1, Chanthaburi, Khao Sabap Nat. Park, near Phliu Waterfalls, 150-300 m, 23-24.XI.85; 3, Khao Yai Nat. Park, 750-850 m, 26.XI.-3.XII.85 (MHNG).

Distribution: Malaysia (Sarawak), Indonesia (Java), Thailand. — New to Thailand.

Scaphisoma rufescens (Pic)

Pseudoscaphosoma punctatum var. *rufescens* Pic, 1920*c*: 24.
Scutoscaphosoma distinctipenne Pic, 1923*b*: 195.
Scaphisoma rufescens; LÖBL 1981*b*: 157.

Material examined: 7, Chiang Mai, Chiang Dao, 450 m, 5-11.IV.58 (Maa); 1, Phuket, hills near Surin Beach, 1.-6.XI.87 (Heiss) (BMH, MHNG).

Distribution: Malaysia (Sabah, Sarawak), Indonesia (Kalimantan), Singapore, Vietnam, Thailand. — New to Thailand.

Scaphisoma cribripenne (Pic)

Scutoscaphosoma cribripenne Pic, 1923*a*: 17.
Scaphisoma cribripenne; Löbl, 1981*b*: 158.

Material examined: 3, Chiang Mai, Chiang Dao, 450 m, 5-11.IV.58 (Maa) (BMH, MHNG).

Distribution: Vietnam, Thailand. — New to Thailand.

Scaphisoma delictum Löbl

Scaphisoma delictum Löbl, 1981*b*: 158.

Material examined: 1, Mae Hong Son, Sop Pong Forest Park, 600-700 m, 12.XI.85 (MHNG).

Distribution: Vietnam, Thailand. — New to Thailand.

Scaphisoma rougemonti Löbl

Scaphisoma rougemonti Löbl, 1984*c*: 996.

Material examined: 3, Chiang Mai, Chiang Dao, 450 m, 5-11.IV.58 (Maa) (BMH, MHNG).

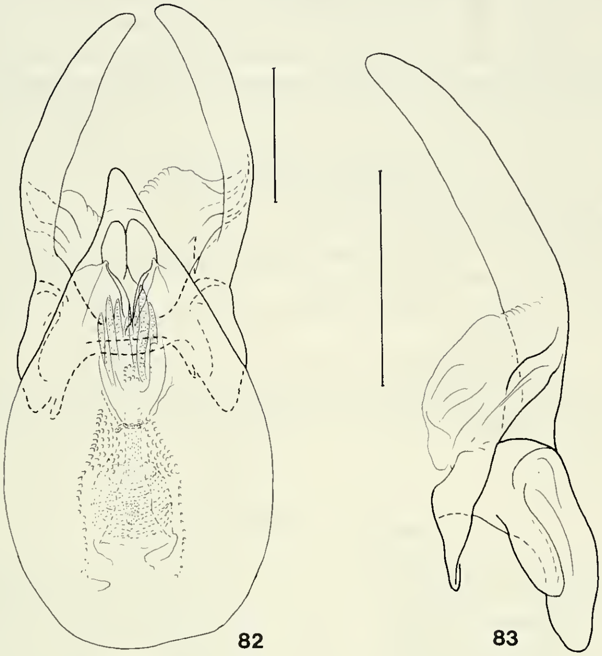
Distribution: Burma, Thailand. — New to Thailand.

Scaphisoma pseudatrox sp. n.

Holotype ♂: Chanthaburi, Khao Sabap Nat. Park, near Phliu Waterfalls, 150-300 m, 23-24.XI.85 (MHNG).

Paratypes: 2♂, 1♀ as holotype; 2♂, Khao Yai Nat Park, near Headquarters, 750-850 m, 26.XI.-3.XII.85 (MHNG).

Length 1.2-1.4 mm, width 0.83-0.97 mm. Dorsal surface black, body ventrally somewhat paler; elytron with a large reddish spot covering most of basal half but not extended to basal or lateral margin and not reaching sutural stria; apical portion of elytron (more than fourth of maximum length), apex of abdomen and legs ochreous; antennae yellowish. Pronotum with rounded lateral margins, lateral keels not or barely visible in dorsal view; pronotal punctation fine in middle and near apical and lateral margins (visible at 24× magnification), on mediobasal area distinctly coarser than in middle. Point of scutellum exposed. Elytra rather flat, with rounded lateral margins and distinct lateral keels in dorsal view; sutural margin not elevated; inner apical angle lying about in same level as outer angle; interval between sutural margin and stria flat, densely and coarsely punctate; sutural stria deep, near base somewhat curved, accompanied by coarse punctures; disk with 3 oblique rows of very coarse punctures extended apically to apical third, and with few additional very coarse punctures on mediolateral area; inner basal area densely and coarsely punctate, remaining elytral surface more of less sparsely and finely or very finely punctate. Pygidium very finely punctate. Hypomeron without microsculpture. Median portion of metasternum and abdominal segments with microsculpture consisting of transverse striae, microsculpture absent from mes- and metepisternum, and from laterobasal portion of 1st ventrite. Lateral portion of metasternum finely punctate except for coarse punctures in transverse impressed stria parallel to metacoxa; median portion of metasternum rather coarsely punctured in and around two apical impressions, anterad gradually finer punctate. Metepisternum 0.08-0.10 mm wide, narrowed anteriorly, inner margin rounded apically. Ventrites very finely and sparsely punctate, except on narrow mediobasal area of 1st ventrite which is densely and rather coarsely punctate. Mesocoxal area 0.4-0.5 mm long, with rounded, coarsely punctate margin; metacoxal area 0.06-0.09 mm long, with convex, coarsely punctate margin.



Figs 82 and 83.

82. *Scaphisoma pseudatrox* sp. n., holotype, aedeagus; 83. dtto, paramere. Scale = 0.1 mm.

Sexual characters of male. Segments 1 to 3 of protarsi enlarged. Lobe of 6th ventrite very short, rounded. Aedeagus (Figs 82 and 83) 0.46-0.51 mm long.

This new species is a member of the *rouyeri* group. It shares with *atrox* Löbl wide parameres and long sclerotized teeth in apical portion of the internal sac, but differs conspicuously by the elytral punctation and coloration, and by the parameres not enlarged apically.

Scaphisoma pseudodelictum Löbl

Scaphisoma pseudodelictum Löbl, 1986*a*: 180.

Material examined: 3, Chiang Mai, Doi Suthep, 800 m, 12.VI.86 and 1050 m, 14.XI.87 (Schwendinger); 9, Chiang Dao, 450 m, 5-11.IV.58 (Maa); 26, Khao Yai Nat. Park, near Headquarters, 750-850 m, 26.XI.-3.XII.85 (MHNG, BMH).

Distribution: North India, Thailand. — New to Thailand.

Remarks. In the Khao Yai specimens the apical portions of the parameres are less enlarged than those in specimens from other localities.

Scaphisoma species C

Material examined: 3, Chiang Mai, Chiang Dao, 450 m, 5-11.IV.58 (Maa) (BMH, MHNG).

This species is characterized by conspicuously dense and coarse pronotal punctation. The aedeagus is similar to that in *delictum* and *pseudodelictum,* but larger and with relatively short enlarged apical portion of parameres. Unfortunately, the internal sac in the single male is extruded and its structure cannot be compared with that in other species.

Scaphisoma javanum Löbl

Scaphisoma javanum Löbl, 1979*b*: 326; 1982*b*: 5.

Material examined: 2, Chanthaburi, Khao Sabap Nat. Park, 150-300 m, 23.-24.XI.85; 1, Khao Yai Nat. Park, 750-850 m, near Headquarters, 26.XI.-3.XII.85 (all MHNG).

Distribution: Thailand, Malaysia (Sarawak, Sabah), Indonesia (Java). — New to Thailand.

Remarks. I have carefully reexamined several aedeagi and found that its apical portion is not trifid, as in species of the *haemorrhoidale* group. In *javanum* it seems to be similar to that in species of the *rouyeri* group, with which it also shares lobed parameres.

Scaphisoma paliferum Löbl

Scaphisoma paliferum Löbl, 1984*c*: 999.

Material examined: 2, Chiang Mai, Doi Suthep, 1500 m, 11.XI.85 (Schwendinger); 1, Doi Suthep, III.87 (Rougemont); 2, Doi Pui, 25.I. and 14.III.82 (Rougemont) (all MHNG).

Distribution: Burma, Thailand. — New to Thailand.

Remarks. These specimens exhibit almost exactly the same conspicuous colour pattern as the types.

Scaphisoma species D

Material examined: 1 ♀, labelled "W. Tak"/"J. H. Sedlacek Collector" (MHNG).

This species resembles *testaceomaculatum* (Pic) in colour pattern and in having anterad strongly divergent sutural striae of elytra. In both species the pronotal base is blackish, with an anteriorly enlarged black mediobasal area, but in Thai specimen the remaining surface of the prothorax is ochreous (yellowish in *testaceomaculatum*) and the elytral spot is much larger than in all specimens of *testaceomaculatum* I have seen. Besides, the elytral punctation in the Thai specimen is coarser than that in *testaceomaculatum.*

Scaphisoma amabile Löbl

Scaphisoma amabile Löbl, 1984*c*: 998.

Material examined: 8, Chiang Mai, Doi Suthep, 1050 m, 14.IX.87 (Schwendinger); 1, Doi Suthep, III.87 (Rougemont) (all MHNG).

Distribution: Burma, Thailand. — New to Thailand.

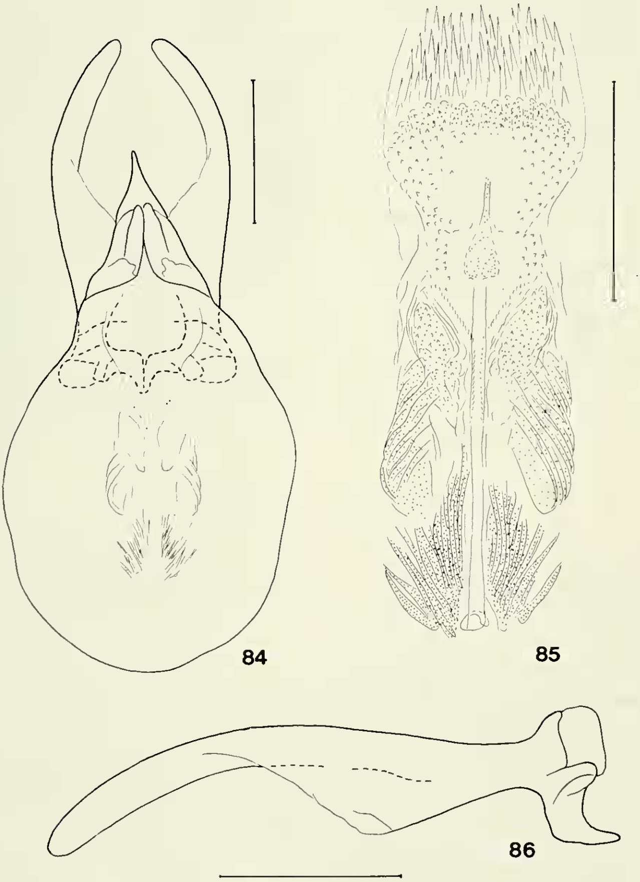
Scaphisoma pseudamabile sp. n.

Holotype ♂: Khao Yai Nat. Park, near Headquarters, 750-850 m, 26.XI.-3.XII.85 (MHNG).

Paratypes: 5♂, 9♀, as holotype; 1♀, Chiang Mai, Doi Suthep, 800 m, 12.V.86 (Schwendinger) (all MHNG).

Length 1.2-1.5 mm, width 0.85-1.0 mm. Body ochreous, apex of elytra distinctly darkened, elytral base sometimes somewhat darkened. In external characters extremely similar to *amabile* Löbl from which it differs by elytra with less well delimited darkened areas, sutural striae parallel from their middle to curved anterior portion, metacoxal area somewhat shorter (0.05-0.06 mm) and sometimes only barely longer than mesocoxal area.

As in *amabile,* the transverse row of punctures in front of the metacoxa is well marked and usually lying in an impressed stria. The length of the antennomeres is almost the same in both species (in holotype of *pseudamabile:* III 5, IV 16, V 22, VI 19, VII 25, VIII 21, IX 26, X 26, XI 32).



Figs 84 to 86.

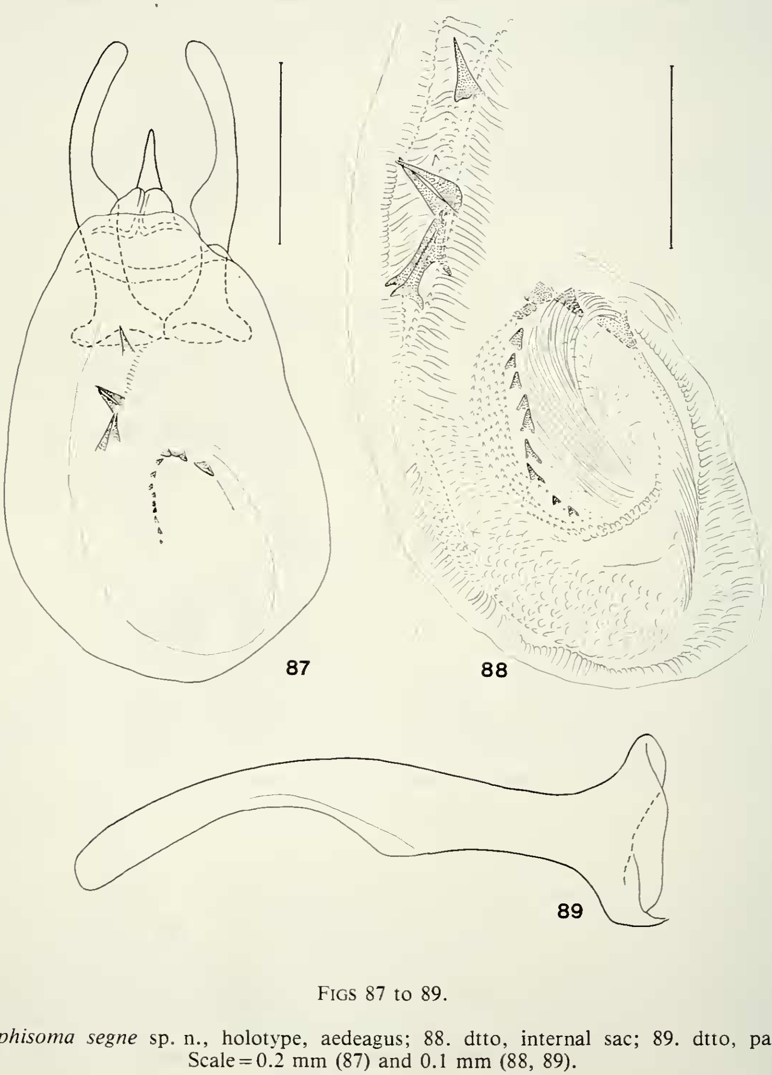
84. *Scaphisoma pseudamabile* sp. n., paratype from Khao Yai Nat. Park, aedeagus; 85. dtto, internal sac; 86. dtto, paramere. Scale = 0.1 mm.

This new species is characterized by the aedeagus which is 0.52-0.59 mm long (Figs 84 to 86) differing notably from that of *amabile* in the shape of the parameres.

Scaphisoma segne sp. n.

Holotype ♂: Chiang Mai, Doi Suthep, south slope, 1450 m, 4.XI.85 (MHNG).

Length 1.7 mm, width 1.12 mm. Body ochreous, apical abdominal segments and tibiae somewhat paler, tarsi and antennae yellowish. Antennae rather long, relative length of antennomeres: III 6, IV 10, V 19, VI 22, VII 25, VIII 20, IX 25, X 25, XI 30; segment IV rather slender, about 3 × longer than wide; V distinctly wider than IV, 4 × longer than



Figs 87 to 89.

87. *Scaphisoma segne* sp. n., holotype, aedeagus; 88. dtto, internal sac; 89. dtto, paramere. Scale = 0.2 mm (87) and 0.1 mm (88, 89).

wide; VI slightly wider than V, 4× longer than wide; VII about 3.5× longer than wide; VIII somewhat wider than VI, well 3× longer than wide; XI about as wide as VII, 4× longer than wide. Pronotum with rounded lateral margins and not visible lateral keels in dorsal view; punctation moderately dense and extremely fine, barely visible at 50× magnification. Point of scutellum exposed. Elytra rather strongly narrowed apically, with rounded lateral margin; lateral keel in dorsal view visible from base to apex; apical margin truncate; inner apical angle situated somewhat behind level of outer angle; sutural margin not elevated; sutural stria shallow, parallel to suture, curved near base, evanescent laterally of pronotal lobe; interval between sutural stria and margin flat, very finely punctate; punctation near base about as that on pronotum, on apical 2/3 dense and fine, formed by relatively well delimited punctures most of which are smaller than intervals between them. Pygidium very finely punctate and with microsculpture consisting of points. Mesepimeron about 1.5× longer than interval between its end and mesocoxa. Metasternum without microsculpture; centre moderately convex, lacking impression; punctation very fine and sparse, only on medio-apical area denser, formed by larger but very shallow punctures. Mesocoxal area 0.05 mm long, margin convex, almost indistinctly punctured. Metepisternum flat, 0.15 mm wide, somewhat narrowed anteriorly, inner margin impressed, straight, only near angles rounded. First ventrite lacking microsculpture, laterally very finely and sparsely punctate, on median part rather densely and less finely punctate. Metacoxal area large, 0.12 mm long, margin convex, with fine, almost indistinct punctures. Following ventrites with microsculpture consisting of punctures. Tibias slender, I and III straight, II somewhat curved.

Sexual characters of male. Segments 1 to 3 of protarsi and 1 and 2 of mesotarsi enlarged. Lobe of 6th ventrite triangular, 0.06 mm long. Aedeagus (Figs 87 to 89) 0.70 mm long.

The distal portion of the median lobe seems to be dorsally split as in members of the *haemorrhoidale*-group. Should the split prove to be incomplete, the species may belong to the *rouyeri*-group.

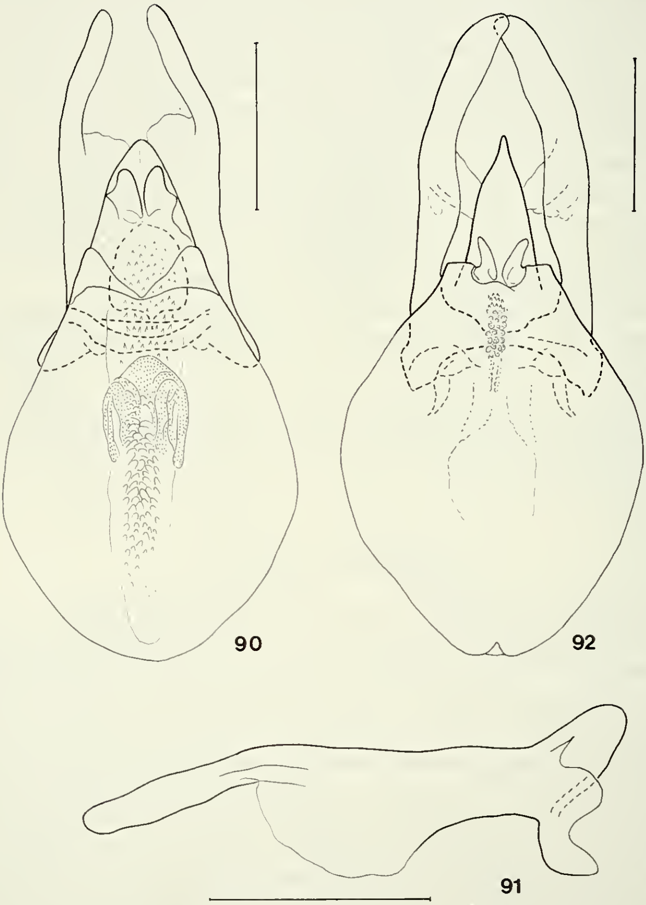
S. segne may be readily identified by the characteristic structures in the internal sac.

Scaphisoma egenum sp. n.

Holotype ♂: Khao Yai Nat. Park, 750-850 m, 26.XI.-3.XII.85 (MHNG).

Paratypes: 7♂, 10♀, as holotype (MHNG); 3♂, 3♀, Chiang Mai, Doi Chiang Dao, 450 m, 7.V.87 (Schwendinger) (MHNG), 1♀ Chiang Dao, 450 m, 5.-11.IV.58 (Maa) (BMH).

Length 1.25-1.40 mm, width 0.83-0.97 mm. Body more or less dark reddish brown to black, apical 1/4 to 1/3 of elytra ochreous or yellowish. Apical abdominal segments, femora and tibiae ochreous, tarsi and antennae usually still somewhat paler. Antennae similar as in other species of the *haemorrhoidale*-group, relative length of antennomeres: III 5, IV 13, V 20, VI 16, VII 18, VIII 16, IX 19, X 18, XI 25 (holotype). Pronotum with rounded lateral margins; lateral keels not visible in dorsal view; punctation fairly dense and very fine, barely visible at 24× magnification. Minute point of scutellum exposed. Elytron fairly narrowed apically; lateral margin moderately rounded; lateral keel usually distinct in dorsal view from base to apex; apical margin somewhat rounded; inner apical angle lying behind level of outer angle; sutural margin elevated; sutural stria rather fine, somewhat divergent anteriorly, barely curved near base, finely punctate; interval between sutural stria and margin flat, with a row of very fine punctures; punctation on basal 1/4 sparse and fine to very fine, towards centre denser and coarser, about on apical 3/5 fairly dense and rather coarse, with punctures usually distinctly smaller than intervals. Pygidium extremely finely punctate, as on ventrites with microsculpture consisting of transverse striae. Mesepimeron distinctly longer than interval between its end and mesocoxa. Metasternum with moderately convex and very finely punctate centre; medio-apical portion flattened, densely and relatively coarsely punctate, with microsculpture consisting of transverse striae, lacking impressions or very shallowly impressed near metacoxa. Lateral portion of metasternum lacking microsculpture, sparsely and very finely punctate, with a more or less irregular row of fine punctures in front of metacoxa. Mesocoxal area 0.06-0.07 mm long, with oblique inner and rounded outer margin, and very fine marginal punctures. Metepisternum flat, 0.09-0.11 mm wide, moderately narrowed anteriorly,



FIGS 90 to 92.

90. *Scaphisoma egenum* sp. n., paratype from Khao Yai Nat. Park, aedeagus; 91. dtto, paramere; 92. *Scaphisoma pressum* sp. n., holotype. Scale = 0.1 mm (90, 91) and 0.2 mm (92).

inner margin not or barely impressed, straight except near angles. First ventrite all over sparsely and very finely punctate; not microsculptured on laterobasal area. Tibiae straight, slender.

Sexual characters of male. Segments 1 to 3 of protarsi and 1 and 2 of mesotarsi distinctly enlarged. Aedeagus (Figs 90 and 91) 0.34-0.41 mm long.

This species may be readily separated from other members of the *haemorrhoidale*-group having lobed parameres by the small size of the body and by the colour pattern.

The specimens from Chiang Dao are notably darker than those from Khao Yai Nat. Park.

Scaphisoma scabiosum Löbl

Scaphisoma scabiosum Löbl, 1986*a*: 191.

Material examined: 6, Chiang Rai, Nam Tok, Ban Du, III.87 (Rougemont); 2, 10 km W Wiang Pa Pao, Ban Huay Ya Sai, 780 m, 28.I.88 (Schwendinger).

Distribution: India (Meghalaya), Thailand. — New to Thailand.

Scaphisoma aurun Löbl

Scaphisoma aurun Löbl, 1979*a*: 110; 1986*a*: 191.

Material examined: 1, Chiang Mai, Doi Inthanon, 910 m, 23.II.87 (Schwendinger); 1, Doi Chiang Dao, 450 m, 7.V.87 (Schwendinger); 2, Chiang Dao, 600 m, 23.XII.80 (Deharveng, Gouze) (all MHNG).

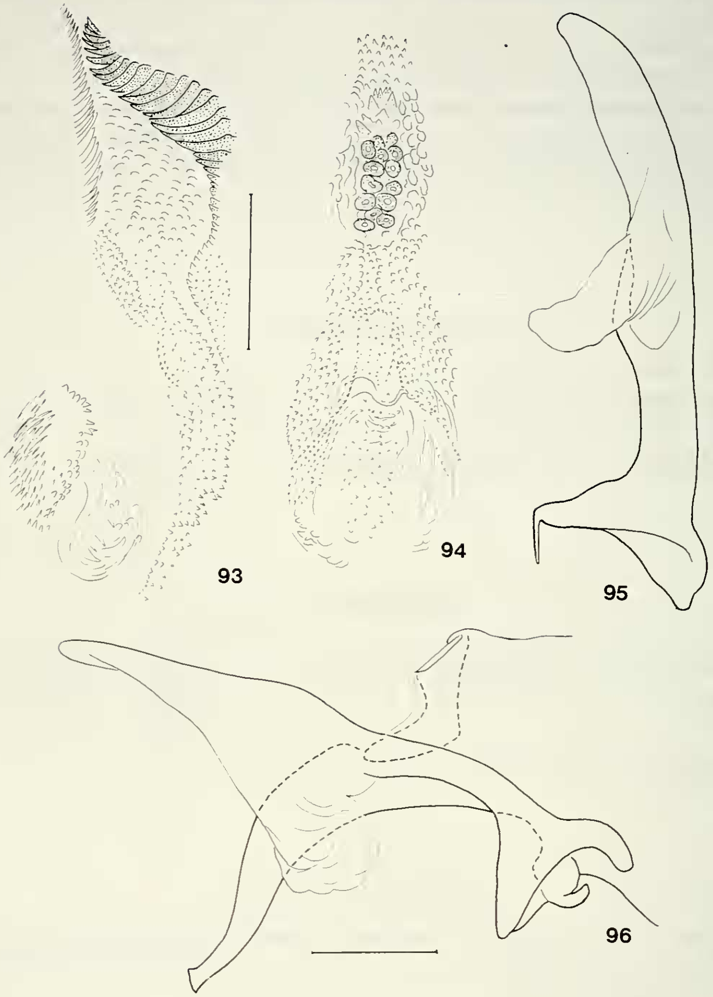
Distribution: India, Thailand. — New to Thailand.

Scaphisoma pressum sp. n.

Holotype ♂: Khao Yai Nat. Park, near Headquarters, 750-850 m, 26.XI.-3.XII.85 (MHNG).

Paratypes: 3♂, 1♀ as holotype (MHNG), 1♂ Nakhon Ratchasima, Sakaerat Exp. Station, 14.VIII.70 (Franz) (coll. Franz).

Length 1.5-1.6 mm, width 1.0-1.20 mm. Body ochreous, legs and antennae yellowish. Very similar to *aurun* from which it differs by the 1st ventrite lacking coarse mediobasal punctures, and by the aedeagus. Antennae very long, relative length of antennomeres as III 7, IV 17, V 27, VI 22, VII 27, VIII 22, IX 28, X 24, XI 28 (holotype). Mesocoxal area 0.05-0.06 mm long, margin convex, distinctly punctured; metacoxal area 0.06-0.08 mm long, margin convexly rounded and coarsely punctured. Lobe of 6th ventrite small, triangular, 0.05 mm long. Aedeagus (Figs 92 to 96) 0.81-0.87 mm long. Distal portion of median lobe more curved than in *aurun,* and with divergent short dorsal branches. Internal sac lacking a pair of median sclerites, and includes a bunch of sclerotized teeth orientated ventrally. Parameres larger than in *aurun*.



Figs 93 to 96.

93. *Scaphisoma pressum* sp. n., holotype, internal sac in lateral view; 94. dtto, dorsal view; 95. dtto, paramere; 96. dtto, distal portion of median lobe in lateral view with paramere. Scale = 0.1 mm.

Scaphisoma cederholmi Löbl

Scaphisoma cederholmi Löbl, 1971: 983; 1986*a*: 193.

Material examined: 1, Chiang Mai, 14.XI.68 (Satô); 1, Kanchanaburi, Sai Yok Nat. Park, 21.VII.87 (Schwendinger); 1, Khao Yai Nat. Park, near Headquarters, 750-850 m, 26.XI.-3.XII.85; 1, Phuket, hills near Surin Beach, 1.-6.XI.87 (Heiss) (all MHNG).

Distribution: Sri Lanka, India (Assam), Thailand.

Scaphisoma tetrastictum Champion

Scaphosoma tetrastictum Champion, 1927: 275.
Scaphisoma tetrastictum; LÖBL 1979*a*: 108, 1980: 116, 1981*c*: 109, 1986*a*: 191.

Material examined: 1, Chiang Mai, Doi Suthep, 1500 m, 4.XI.86 (Schwendinger); 1, Doi Pui, north slope, 1500 m, 19.XII.88 (Trautner & Geigenmüller); 1, Chiang Rai, env. 30 km E Chiang Rai, 12.III.82 (Rougemont); 1, Mae Hong Son, Tham Lok Forest Park, 8 km N Sop Pong, 700 m, 11. & 13.XI.85 (MHNG, SMNS).

Distribution: India, Burma, Thailand, Vietnam, Taiwan. — New to Thailand.

Scaphisoma obliquemaculatum Motschulsky

Scaphisoma obliquemaculatum Motschulsky, 1863: 435.
Scaphosoma rufomaculatum Pic, 1921*b*: 5.
Scaphosoma luteoapicale Pic, 1923*a*: 17.
Scaphosoma mahense Scott; VINSON 1943: 197.
Scaphisoma obliquemaculatum; LÖBL 1971: 984, 1976: 273, 1977b: 43.

Material examined: 4, Khao Yai Nat. Park, near Headquarters, 750-850 m, 26.XI.-3.XII.85; 2, Chanthaburi, Khao Sabap Nat. Park, near Phliu Waterfalls, 150-300 m, 23-24.XI.85 (all MHNG).

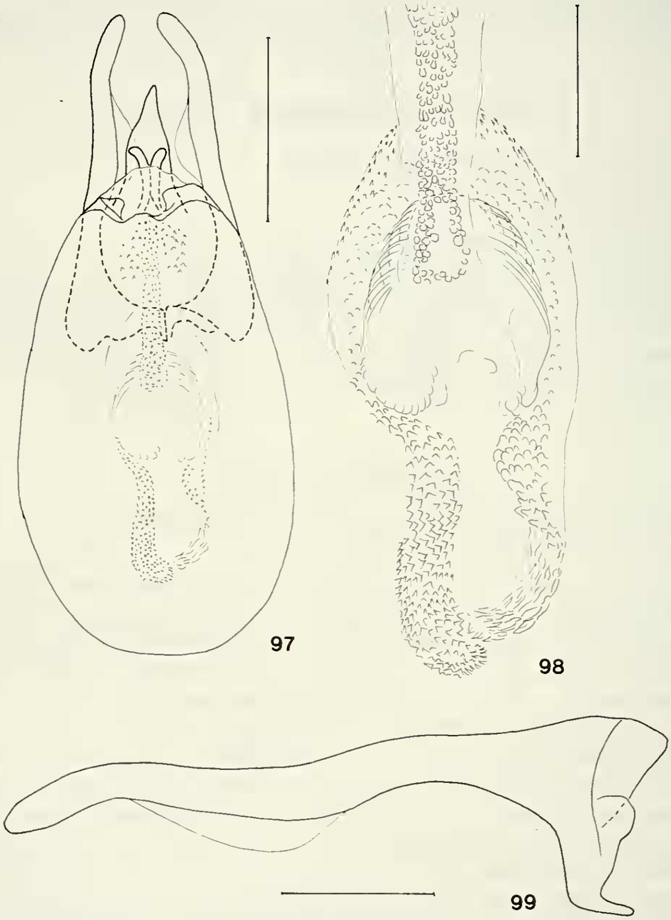
Distribution: Sri Lanka, Thailand, Vietnam, Indonesia (Java, Sumatra, Sulawesi) Malaysia (Sarawak), Mascarene archipelago. — New to Thailand.

Scaphisoma valens sp. n.

Holotype ♂: Chiang Mai, Doi Inthanon, 1650 m, 7.XI.85 (MHNG).

Paratypes: 1♂, 2♀ as holotype (MHNG).

Length 1.55-1.70 mm, width 1.10-1.15 mm. Body, femora and tibiae ochreous, antennae, tarsi and apex of abdomen yellowish. Antennae long, similar as in other species of the *haemorrhoidale*-group; relative length of antennomeres in holotype: III 8, IV 17, V 23, VI 21, VII 26, VIII 22, IX 26, X 25, XI 27. Pronotum with rounded lateral margins, lateral keels not visible in dorsal view; punctation dense and coarse, punctures distinct at 10× magnification. Punctures relatively well delimited, at least some as large or larger than intervals between them. Point of scutellum exposed. Elytron with rounded lateral margin; lateral keel in dorsal view barely visible, obsolete in middle portion; apical margin truncate; inner apical angle situated behind level of outer angle; sutural margin not elevated; sutural stria moderately deep, parallel to margin, not curved near base, coarsely punctate; interval between sutural stria and margin flat, narrow, coarsely punctate; discal punctation all over dense and coarse, decidedly coarser than on pronotum, punctures deep, rather well delimited, mostly larger than intervals between them. Pygidium extremely finely punctate, with microsculpture consisting of punctures. Mesepimeron about 2× longer than interval between its top and mesocoxa. Metasternum not microsculptured, in middle convex, flattened between metacoxae; punctation coarse, sparse on centre, dense just in front of apical intercoxale apophyse, moderately dense on lateral portion, with punctures forming a transverse row in front of metacoxa. Mesocoxale area small, about 0.04-0.06 mm long, rounded, with coarse marginal punctures. Metepisternum convex, 0.13-0.15 mm wide, anteriorly moderately narrowed, with distinctly punctate inner portion; inner margin impressed, rounded or somewhat sinuate. First ventrite not microsculptured, coarsely and sparsely punctate on median portion, very finely and sparsely punctate on lateral portion. Metacoxal area 0.08-0.09 mm long, margin convex, coarsely punctate. Following ventrites obsiously lacking microsculpture, 5th ventrite with extremely fine microsculpture (180×) consisting of transverse lines or waves. Tibiae slender, pro- and mesotibiae straight, metatibiae somewhat curved.



Figs 97 to 99.

97. *Scaphisoma valens* sp. n., paratype from Doi Inthanon, aedeagus; 98. dtto, internal sac, 99. dtto, paramere. Scale = 0.2 mm (97) and 0.1 mm (98, 99).

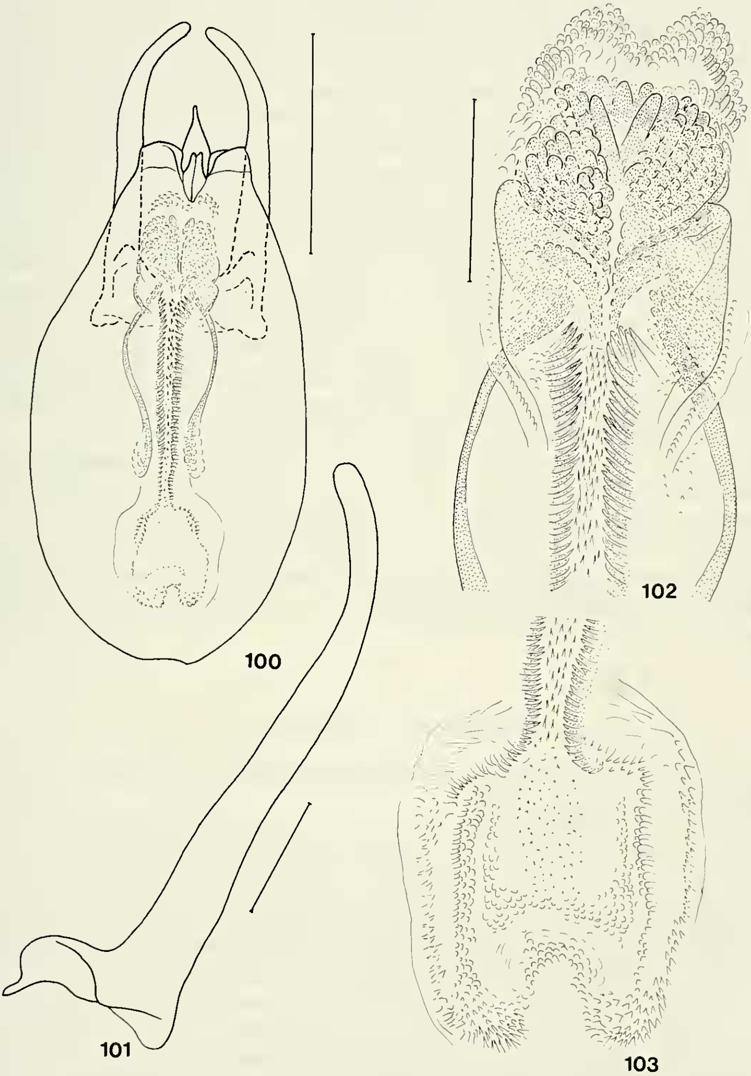
Sexual characters of male. Segments 1 and 2 of protarsi fairly widened, segment 3 somewhat widened. Aedeagus (Figs 97 to 99) 0.75-0.83 mm long.

This species belongs also to the *haemorrhoidale*-group. It may be identified by the combination of the external characters.

Scaphisoma dives sp. n.

Holotype ♂: Chiang Mai, Doi Suthep, 1550 m, ravine, north slope, 4.XI.85 (MHNG).

Paratypes: 4♂, 2♀ as holotype; 2♂, 1♀, Doi Suthep, 1450 m, southern slope, 4.XI.85; 1♀, Doi Suthep, 1400 m, north slope, 5.XI.85; 5♂, 1♀, Doi Suthep, III.87 (Rougemont); 2♂, 11♀, Doi Pui, 1500 m, north slope, 19.XII.88 (Trautner & Geigenmüller); 1♂, Doi Inthanon, 1250 m, ravine near Forestry Department, 6.XI.85 (MHNG, SMNS).



Figs 100-103.

100. *Scaphisoma dives* sp. n., holotype, aedeagus; 101. dtto, paramere; 102. dtto, apical portion of internal sac; 103. dtto, basal portion of internal sac. Scale = 0.3 mm (100) and 0.1 mm (101-103).

Length 1.75-1.95 mm, width 1.17-1.32 mm. Body reddish brown, elytra sometimes somewhat paler at apex, paler area not well delimited; femora and tibiae about as body, apex of abdomen and tarsi somewhat paler. Antennae yellowish, long. Antennomeres slender, their relative length: III 6, IV 19, V 32, VI 26, VII 29, VIII 26, IX 29, X 26, XI 31 (holotype); segment IV-VI almost evenly wide, VI more than 6 × longer than wide, VII about 4 × longer than wide, VIII well 6 × longer than wide, only slightly wider than VI. Pronotum and elytra similar as in *siamense* and *bispinosum*. Pronotal punctation very fine, barely visible at 24 × magnification. Elytron with lateral keel not visible near apex (dorsal view), inner apical angle lying in or somewhat behind level of outer angles, sutural margin elevated, sutural striae also in anterior half very feebly but distinctly divergent, interval between sutural stria and margin rather coarsely punctate, discal punctation coarse and dense, near sutural stria sparser and finer than on center; punctures near basal margin usually notably finer but not sparser than on center and decidedly coarser than on pronotum; minute humeral bump impunctate. Mesepimeron somewhat longer than interval between its top and mesocoxa. Metasternum all over sparsely and very finely punctate (dense row of coarse punctures in front of metacoxa excepted); centre convex, medio-apical area flattened, lacking impressions, apical portion with microsculpture consisting of transverse striae, as that on visible abdominal segments. Mesocoxal area 0.09-0.11 mm long, apically rounded, inner margin oblique or barely rounded, finely punctate, outer margin oblique, impunctate. Metepisternum 0.14-0.16 mm wide, moderately narrowed anteriorly, inner margin impressed, straight, near angles rounded. First ventrite all over sparsely and very finely punctate. Metacoxal area 0.09-0.12 mm long, with rounded, distinctly punctured margin. Tibiae straight, slender.

Sexual characters of male. Segments 1-3 of protarsi notably enlarged, 1 and 2 of mesotarsi somewhat enlarged. Lobe of 6th ventrite 0.10-0.12 mm long, rather slender, gradually narrowed. Aedeagus (Figs 100 to 103) 0.87-1.0 mm long.

This species may be readily distinguished from members of the *haemorrhoidale*-group having not lobed parameres, by the shape of the sclerotized structures of the internal sac, especially by two slender bunches of filamentous sclerites at each side of median rows of denticules.

Scaphisoma incurvum sp. n.

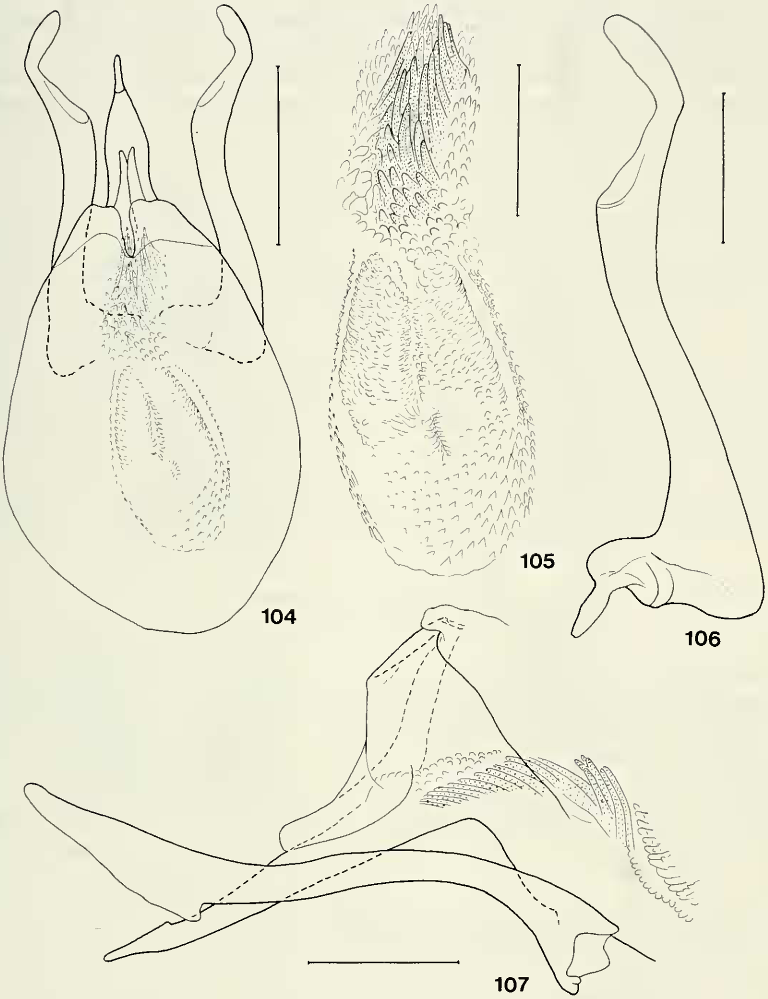
Holotype ♂: Phetchaburi, Kaeng Krachan Nat. Park, 300-400 m, 25-30 km from Headquarters, 17.XI.85 (MHNG).

Paratypes: 6 ♂, 8 ♀ as holotype; 1 ♂, as holotype but 200 m, near Headquarters, 16.XI.85; 14 ♂, 13 ♀, same but 450 m, 30-35 km from Headquarters, 18-19.XI.85 (all MHNG).

Length 1.35-1.55 mm, width 0.92-1.05 mm. Body dark reddish brown. Elytron with apical 1/4 ochreous to yellowish, as pale as apical abdominal segments, femora and tibiae. Tarsi and antennae yellowish. Relative length of antennomeres: III 4, IV 15, V 22, VI 18, VII 20, VIII 16, IX 19, X 18, XI 25 (holotype). In most external characters similar to *prehensor* Champion, differs by finer punctate elytra, mesepimeron somewhat longer than interval between its top and mesocoxa; metasternum lacking microsculpture and transverse row of punctures in front of metacoxa, mesocoxal area 0.08-0.09 mm long, with very fine marginal punctures, metacoxal area 0.08-0.10 mm long.

Sexual characters of male. Segments 1 to 3 of protarsi distinctly enlarged, segments 1 and 2 of mesotarsi somewhat enlarged. Aedeagus (Figs 104 to 107) 0.66-0.87 mm long.

This species may be readily distinguished by the peculiar shape of the parameres.



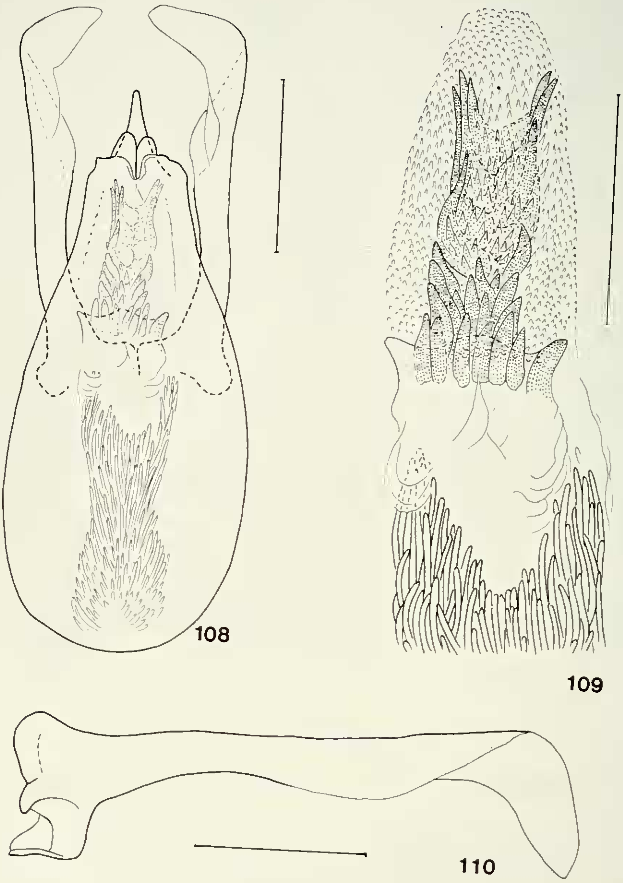
FIGS 104 to 107.

104. *Scaphisoma incurvum* sp. n., paratype from Kaeng Krachan Nat. Park, aedeagus; 105. dtto, internal sac; 106. dtto, paramere; 107. dtto, distal portion of median lobe in lateral view with paramere. Scale = 0.2 mm (104) and 0.1 mm (105-107).

Scaphisoma favens sp. n.

Holotype ♂: Chiang Mai, Doi Suthep, 1180 m, IX.87, pit-fall trap (Schwendinger) (MHNG).

Length 2.0 mm, width 1.25 mm. Body, femora and tibiae reddish brown, elytron yellowish apically, its pale portion not well delimited but covering decidedly more than 1/4 of elytral length. Apex of abdomen, tarsi and antennae yellowish. Antennae long, relative length of segments: III 5, IV 20, V 30, VI 25, VII 28, VIII 24, IX 27, X 26, XI 30. Pronotum with regularly rounded lateral margins, in dorsal view not visible lateral keels, rather dense and very fine punctation distinct at 24× magnification. Point of scutellum exposed. Elytra laterally rounded, fairly narrowed apically; lateral keel visible in dorsal view from base to apex, apical margin truncate; inner apical angle right, lying in level of outer angle; sutural margin elevated except in anterior fourth; sutural stria rather deep, moderately divergent from apex to anterior fourth, then parallel with margin, curved at base, not extended along basal margin; intervals between sutural stria and margin flat, densely punctate; punctation dense and rather coarse, punctures on basal half usually smaller, on apical half larger than intervals, finely punctate humeral area narrow.



FIGS 108-110.

108. *Scaphisoma favens* sp. n., holotype, aedeagus; 109. dtto, internal sac; 110. dtto, paramere. Scale = 0.3 mm (108) and 0.2 mm (109, 110).

Pygidium extremely finely punctate. Mesepimeron somewhat longer than interval between its top and mesocoxa. Metasternum with distinct microsculpture consisting of striae (transverse on centre and near metacoxa, oblique or longitudinal on lateral portion), surface near anterior margin not microsculptured; centre moderately convex, with very fine and rather sparse punctation; two medio-apical shallow impressions denser and somewhat coarser punctate; lateral portion very sparsely and extremely finely punctate. Mesocoxal area 0.10 mm long, rounded, marginal punctures fine. Metepisternum flat, very finely punctate, 0.16 mm wide, anteriorly moderately narrowed, inner margin impressed, somewhat sinuate, in apical 1/4 distinctly convex. Abdominal segments with well visible microsculpture consisting of transverse striae. First ventrite sparsely and very finely punctate, on mediobasal portion several punctures coarser. Metacoxal area 0.06 mm long, margin rounded and finely punctate. Protibiae barely curved, rather stout; meso- and metatibiae straight, mesotibiae rather stout, metatibiae slender.

Sexual characters of male. Segments 1 to 3 of protarsi and 1 and 2 of mesotarsi strongly enlarged, segment 1 of protarsi nearly as large as protibia, segment 1 of mesotarsi larged than apex of mesotibia. Lobe of 6th ventrite 0.18 mm long, slender, moderately tapering apically, with rounded apical margin. Aedeagus (Figs 108 to 110) 1.10 mm long.

This new species is also a member of the *haemorrhoidale*-group. It may be distinguished from other species of similar size and colour pattern by the metasternal microsculpture and the shape of the parameres of the aedeagus.

Scaphisoma spissum sp. n.

Holotype ♂: Chiang Mai, Doi Suthep, 1400 m, 5.XI.85 (MHNG).

Length 1.6 mm, width 1.12 mm. Body very dark, almost black, apical third of elytra, apical abdominal segments, femora and tibiae ochreous. Hypomera very dark reddish brown. Tarsi and antennae yellowish. Relative length of antennomeres: III 5, IV 15, V 24, VI 23, VII 24, VIII 22, IX 24, X 23, XI 27. Most external diagnostic characters as in *prehensor* Champion from which it differs by the metasternum and the 1st ventrite all over very finely punctate, the former without a transverse row of punctures parallel to the metacoxa. The mesepimeron is decidedly longer than the intervals between its top and the mesocoxa, as in some specimens of *prehensor*.

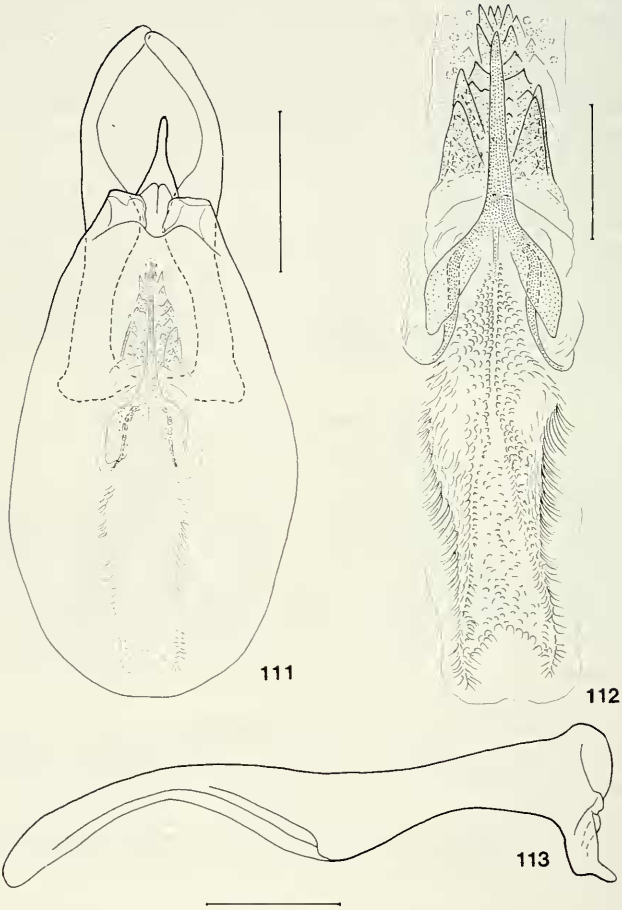
Sexual characters of male. Segments 1 to 3 of protarsi moderately enlarged. Lobe of 6th ventrite 0.11 mm long, slender, somewhat narrowed apically, with convex apical margin. Aedeagus (Figs 111 to 113) 0.81 mm long.

This species can be positively identified only by its aedeagus which differs from that in other members of the *haemorrhoidale*-group by the internal sac bearing a long symmetrical median sclerit.

Scaphisoma meracum sp. n.

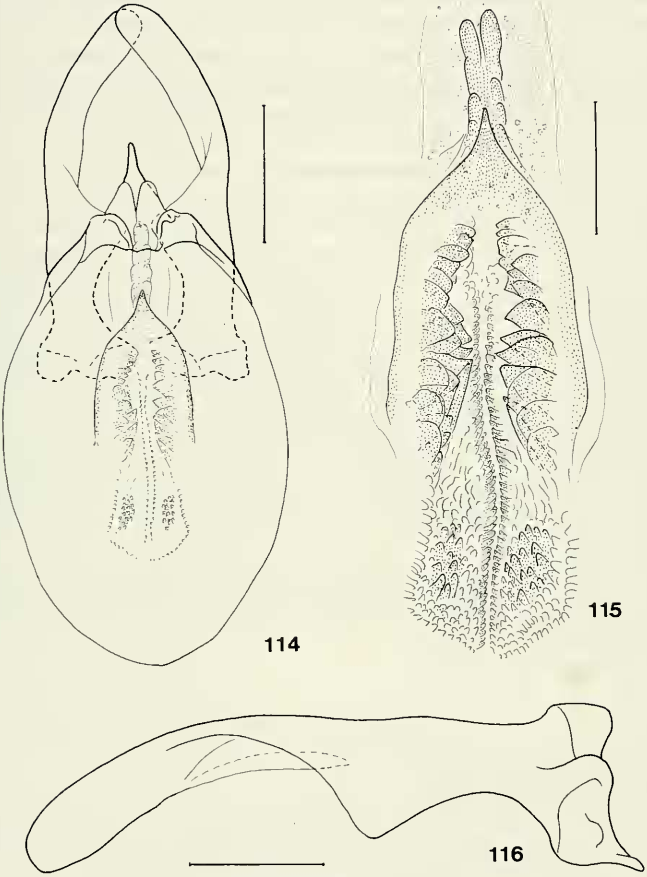
Holotype ♂: Chiang Mai, Doi Suthep, 1400 m, ravine, 5.XI.85 (MHNG).
Paratype ♂: Chiang Mai, Doi Suthep, 1180 m, pit-fall trap, VI.87 (Schwendinger) (MHNG).

Length 1.9 mm, width 1.27 mm. Body very dark reddish brown to blackish. Apex of abdomen, femora and tibiae ochreous, tarsi and antennae yellowish. Antennae similar as in other species of the group *haemorrhoidale*, with slender segments of relative length: III 6, IV 20, V 27, VI 22, VII 26, VIII 22, IX 26, X 25, XI 28 (holotype). Pronotum with regularly convex lateral margins; lateral keels not visible in dorsal view; punctation rather



FIGS 111 to 113.

111. *Scaphisoma spissum* sp. n., holotype, aedeagus; 112. dtto, internal sac; 113. dtto, paramere. Scale = 0.2 mm (111) and 0.1 mm (112, 113).



FIGS 114 to 116.

114. *Scaphisoma meracum* sp. n., holotype, aedeagus; 115. dtto, internal sac; 116. dtto, paramere. Scale = 0.2 mm (114) and 0.1 mm (115, 116).

dense and very fine, almost indistinct at 24× magnification. Minute point of scutellum exposed. Elytra fairly narrowed apically, lateral margin almost regularly rounded; lateral keel visible (but not very distinct) from base to apex in dorsal view; apical margin truncate; inner apical angle lying behind level of outer angles; sutural margin elevated; sutural striae fine, moderately divergent anteriorly, somewhat curved near base, evanescent at basal margin near pronotal lobe, finely punctate; interval between sutural stria and margin flat, with a dense row of fine punctures; punctation dense and rather coarse, punctures relatively well delimited, mostly as large or somewhat larger than intervals between them, on a very narrow basal area very fine. Pygidium and ventrites with microsculpture consisting of transverse striae, and very finely punctate. Mesepimeron longer than intervals between its top and mesocoxa. Metasternum lacking impressions, with convex, densely and very finely punctate centre, medio-apical area flattened; punctation behind centre dense and more or less coarse, largest punctures near metacoxa (larger than intervals); lateral portion of metasternum very finely and sparsely punctate, with a dense row of rather coarse punctures in front of metacoxa; apical intercoxal process almost impunctate; medio-apical area and surface between meso- and metacoxa microsculptured as abdomen. Mesocoxal area 0.08 mm long, subtriangular, with inner margin oblique, outer margin rounded; marginal punctures fine. Metepisternum 0.14 mm wide, moderately narrowed anteriorly, in outer half convex, inner half flat; inner margin impressed, straight, only near angles rounded. First ventrite not microsculptured laterobasally; punctation very fine and sparse laterally, denser on centre, between metacoxae coarser than on remaining surface. Metacoxal area 0.09 mm long, with convex, distinctly punctate margin. Tibiae straight, slender.

Sexual characters of male. Segments 1 to 3 of protarsi and 1 of mesotarsi strongly enlarged, 2 and 3 of mesotarsi somewhat enlarged. Lobe of 6th ventrite 0.12 mm long, relatively large at base, tapering apically, with rounded apical margin. Aedeagus (Figs 114 to 116), 0.94-0.98 mm long.

This species seems to be closely related to *spissum*. It may be readily separated from the latter by the colour pattern of elytra and by the larger parameres and shape of the sclerotized pieces of the internal sac.

Scaphisoma innotatum Pic

Scaphosoma innotatum Pic, 1926*a*: 46.
Scaphisoma innotatum; Löbl 1981*c*: 110, 1986*a*: 201.

Material examined: 3, Chiang Mai, Doi Chiang Dao, 450 m, 7.V.87 (Schwendinger) (MHNG).

Distribution: India, Thailand, Vietnam. — New to Thailand.

Remarks. No notable differences are found between the Thai and Vietnamese specimens (see discussion in Löbl, 1986*a*).

Scaphisoma armatum Löbl

Scaphisoma armatum Löbl, 1986*a*: 206.

Material examined: 3, Khao Yai Nat. Park, near Headquarters, 750-850 m, 26.XI.-3.XII.85; 1, Chiang Mai, Doi Angkhang, 10 km W Fang, 1500 m, 20.III.87 (Schwendinger); 1, Chiang Rai, 10 km W Wiang Pa Pao, Ban Huay Ya Sai, 780 m, 28.I.88 (Schwendinger) (all MHNG).

Distribution: North India, Thailand. — New to Thailand.

Remarks. Only data on males are recorded. Additional seven females from Khao Yai and Doi Angkhang have been tentatively associated with the males.

Scaphisoma tortile Löbl

Scaphisoma tortile Löbl, 1984*c*: 1004.

Material examined: 19, Phetchaburi, Kaeng Krachan Nat. Park, 300-450 m, 25-35 km from Headquarters, 17-19.XI.85; 1, Chiang Mai, Mae Nang Kaeo, 54 km NE Chiang Mai (via Chiang Rai), 950 m, 3.XI.85; 1, Chiang Rai, 10 km W Wiang Pa Pao, Ban Huay Ya Sai, 780 m, 28.I.88 (Schwendinger) (all MHNG).

Distribution: Burma, Thailand. — New to Thailand.

Remarks. This species may be easily identified by the shape of the sinuate large median sclerit of the internal sac of the aedeagus.

Scaphisoma siamense sp. n.

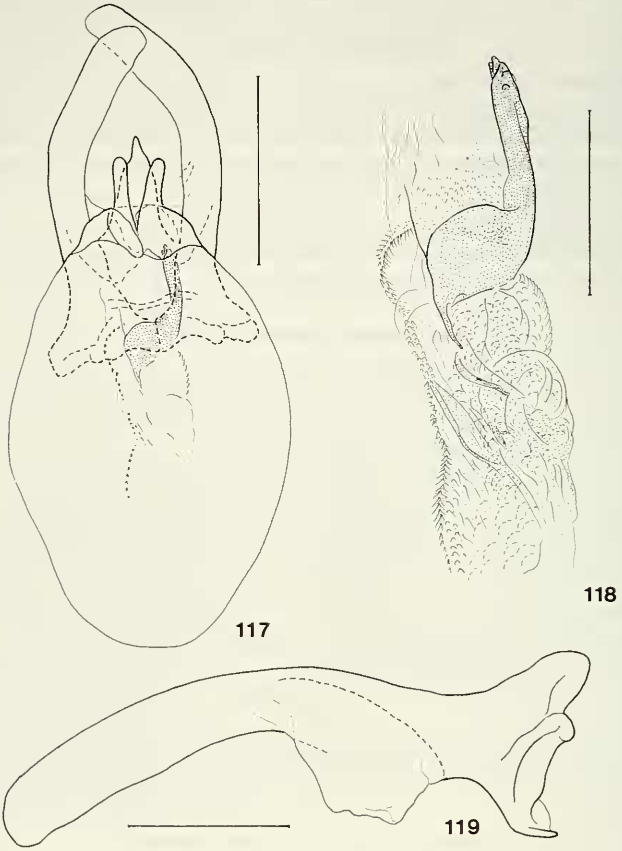
Holotype ♂: Chiang Mai, Doi Inthanon, ravin near Forestry Department, 1250 m, 6.XI.85 (MHNG).

Paratypes: 1♂ as holotype and 1♂, Doi Inthanon, 1650 m, 7.XI.85; 1♂, Doi Inthanon, 1780 m, 7.III.87 (Schwendinger) (all MHNG).

Length 1.55-1.70 mm, width 1.0-1.12 mm. Body ochreous or reddish brown, tarsi and antennae yellowish. Antennae moderately long, relative length of antennomeres as: III 6, IV 16, V 21, VI 18, VII 24, VIII 20, IX 22, X 20, XI 25 (holotype); IV slender, V slightly wider, about 5× longer than wide; VI somewhat wider than V and 4× longer than wide, VII about 4× longer than wide. Pronotum strongly narrowed apically; lateral margins regularly convex; lateral keels in dorsal view visible only near base; punctation very fine, barely visible at 50× magnification. Point of scutellum exposed. Elytron strongly narrowed apically; lateral margin rounded; lateral keel visible in dorsal view from base to apex; apical margin truncate; inner apical angle lying behind level of outer angles; sutural margin not elevated; sutural stria shallow, divergent from apex to middle, then parallel to suture, curved at base, evanescent near pronotal lobe; interval between sutural stria and margin flat, narrow, with a very dense row of fairly fine punctures; discal punctation dense et rather coarse, punctures not well delimited, most as large or larger than intervals between them; punctation much finer on a very narrow humeral area. Pygidium sparsely and very finely punctate, as ventrites with microsculpture consisting of transverse lines. Mesepimeron longer than interval between its top and mesocoxa. Metasternum not microsculptured, median portion somewhat convex anteriorly, flattened apically, without impressions; apical area densely and rather finely punctate, a row of coarse punctures in front of metacoxa distinct; most of metasternal surface sparcely and very finely punctate. Mesocoxal area 0.08 mm long, subtriangular, with punctate inner and impunctate outer margin. Metepisternum flat, 0.13-0.14 mm wide, moderately narrowed anteriorly; inner margin somewhat impressed, straight, near angles rounded. First ventrite all over very finely and sparsely punctate; laterobasal area not microsculptured; metacoxal area 0.08-0.09 mm long, margin convex, coarsely punctate. Tibias straight, slender.

Sexual characters of male. Segments 1 to 3 of protarsi and 1 and 2 of mesotarsi distinctly enlarged. Lobe of 6th ventrite slender, 0.05 mm long, pointed. Aedeagus (Figs 117 to 119) 0.67-0.71 mm.

This species may be readily separated from other members of the *haemorrhoidale*-group by the shape of the parameres and structures of the internal sac.



FIGS 117 to 119.

117. *Scaphisoma siamense* sp. n., paratype from Doi Inthanon, aedeagus; 118. dtto. internal sac; 119. dtto, paramere. Scale = 0.2 mm (117) and 0.1 mm (118, 119).

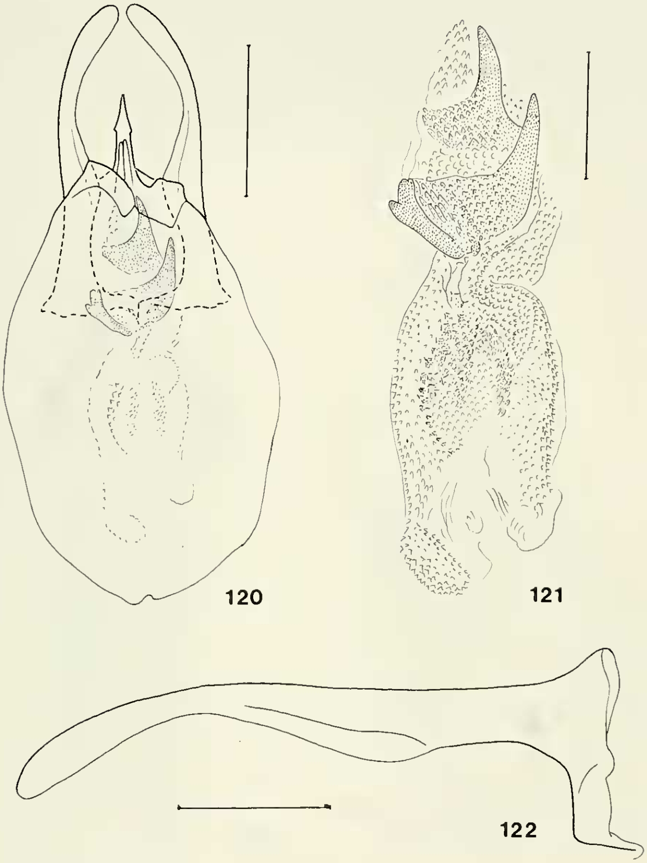
Scaphisoma bispinosum sp. n.

Holotype ♂: Chiang Mai, Doi Suthep, 1450 m, ravine, south slope, 4.XI.85 (MHNG).

Paratype ♂: Chiang Mai, Doi Inthanon, ravine near Forestry Department, 1250 m, 6.XI.85 (MHNG).

Length 1.7 mm, width 1.12-1.14 mm. Very similar to *siamense,* but pronotum not as finely punctate, with punctures distinct at 20× magnification, sutural margin of elytra elevated, sutural striae parallel, except on apical portion, elytral base coarsely punctate except for an very small impunctate humeral bump, and disk somewhat coarser punctured. Antennae longer (relative length of antennomeres in holotype as: III 6, IV 17, V 27, VI 25, VII 28, VIII 23, IX 28, X 26, XI 30). Metasternum flattened only on apical intercoxal process, rather coarsely punctate area extended from latter to level of mesocoxae, mesocoxal area 0.07 mm long, with rounded, distinctly punctate margin. First ventrite on median portion decidedly coarser punctured than on lateral portion, metacoxal area 0.10 mm long. Lobe of 6th ventrite wider, in ♂ 0.07 mm long.

Aedeagus (Figs 120 to 122) 0.77-0.80 mm long.



Figs 120 to 122.

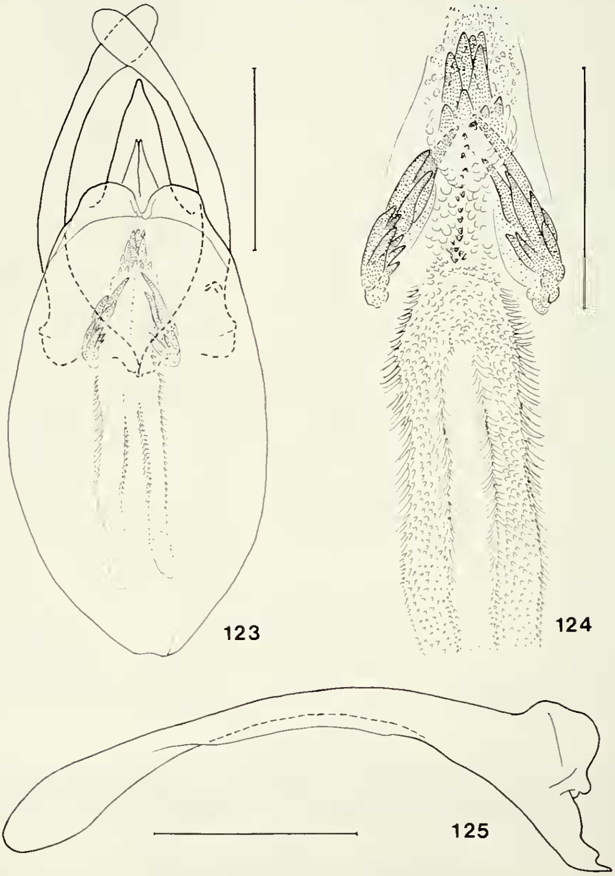
120. *Scaphisoma bispinosum* sp. n., holotype, aedeagus; 121. dtto, internal sac; 122. dtto, paramere. Scale = 0.2 mm (120) and 0.1 mm (121, 122).

Scaphisoma cuspidatum sp. n.

Holotype ♂: Chiang Mai, Doi Inthanon, 1650 m, 7.XI.85 (MHNG).

Paratypes: 5♂, as holotype; 6♂, 3♀, Doi Inthanon, 1780 m, 3.III.87 (Schwendinger); 2♂, Mae Hong Son, Doi Chang, 20 km E Pai, 10.IV.87 (Schwendinger) (all MHNG).

Length 1.85-2.10 mm, width 1.25-1.45 mm. Body very dark reddish brown to black. Elytron with ochreous or yellowish apical portion, pale area longer than fourth of elytron on inner half, extended anteriorly on outer part and reaching almost middle of lateral length of elytron. Relative length of antennomeres: III 6, IV 20, V 28, VI 25, VII 28, VIII 23, IX 27, X 25, XI 31 (holotype). Coloration and most external characters as in *minax* Löbl, from which it differs by lateral keel of elytron usually not visible behind basal third; apical margin of elytron truncate or somewhat rounded; metasternum along apical margin and between meso- and metacoxa with microsculpture consisting of transverse striae; punctation on medio-apical portion of metasternum very fine; transverse row of punctures on lateral portion of metasternum absent or indicated by several very fine punctures; mesocoxal area 0.08-0.09 mm long; metacoxal area 0.12-0.14 mm long, impression behind centre of metasternum somewhat smaller.



FIGS 123 to 125.

123. *Scaphisoma cuspidatum* sp. n., paratype from Doi Inthanon, aedeagus; 124. dtto, internal sac; 125. dtto, paramere. Scale = 0.3 mm (123) and 0.2 mm (124, 125).

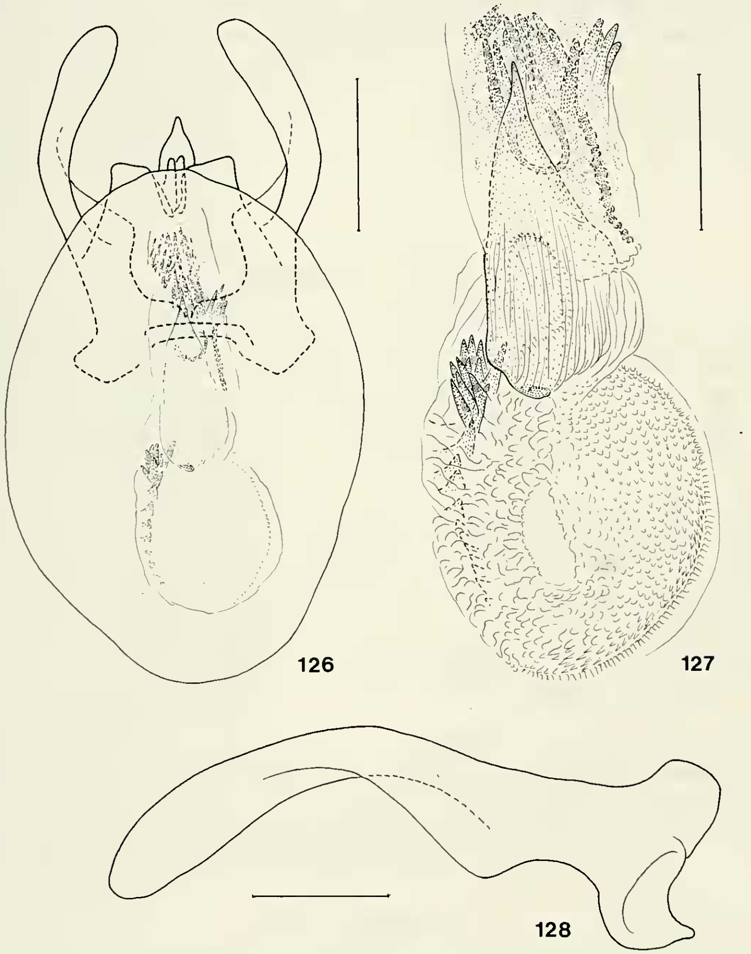
Sexual characters of male. Segments 1 to 3 of protarsi strongly enlarged, 1 and 2 of mesotarsi somewhat enlarged. Lobe of 6th ventrite 0.10-0.12 mm long, apically somewhat tapering, with rounded apical margin. Aedeagus (Figs 123 to 125) 0.96-1.07 mm long.

This species differs drastically from *minax* by the shape of the parameres and by the structure of the internal sac of the aedeagus.

Scaphisoma khao sp. n.

Holotype ♂: Khao Yai Nat. Park, near Headquarters, 750-850 m, 26.XI.-3.XII.85 (MHNG). Paratypes: 10♂, as holotype.

Specimens not included in type material: 9♀, as holotype (MHNG).



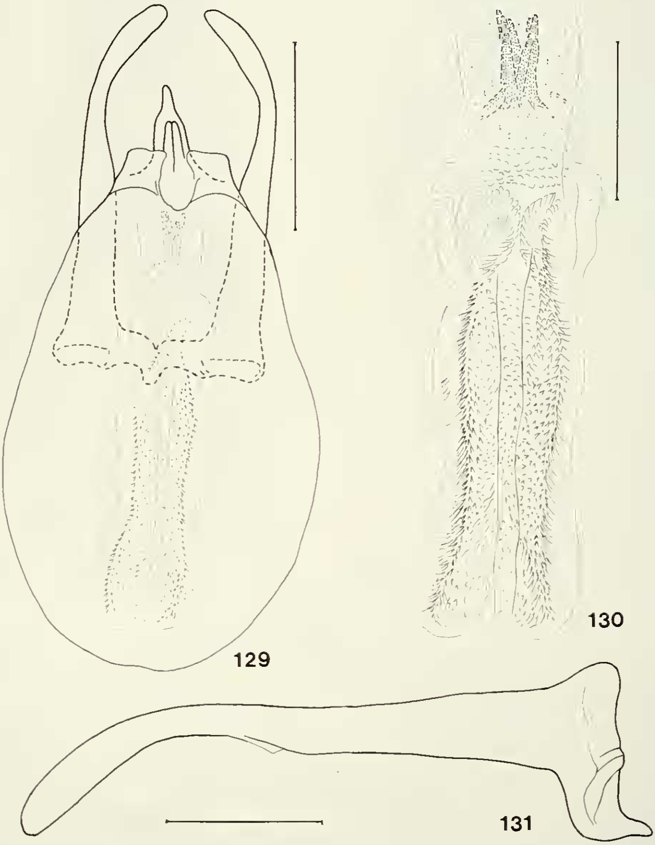
FIGS 126 to 128.

126. *Scaphisoma khao* sp. n., paratype from Khao Yai Nat. Park, aedeagus; 127. dtto, internal sac; 128. dtto, paramere. Scale = 0.2 mm (126) and 0.1 mm (127, 128).

Length 1.5-1.6 mm, width 1.0-1.10 mm. Body dark reddish brown to black, apical third of elytra ochreous or yellowish. Apical abdominal segments and legs ochreous, antennae yellowish. Relative length of antennomeres: III 5, IV 15, V 23, VI 20, VII 23, VIII 20, IX 23, X 22, XI 26 (holotype). External diagnostic characters as in *prehensor* or *tortile.*

Sexual characters of male. Segments 1 to 3 of protarsi and 1 and 2 of mesotarsi strongly enlarged. Lobe of 6th ventrite 0.10-0.12 mm long, tapering apically, with rounded apical margin. Aedeagus (Figs 126 to 128) 0.83-0.86 mm long.

This species may be distinguished only by the shape of the parameres and of the structures of the internal sac. The latter bears a large flat median sclerotized piece, a laterobasal row of strongly sclerotized teeth, and two slender bunches and one wider bunch of sclerotized teeth laterally and apically of median piece. The row of punctures in front of the metacoxa are always well developed.



FIGS 129 to 131.

129. *Scaphosoma morosum* sp. n., paratype from Khao Yai Nat. Park, aedeagus; 130. dtto, internal sac; 131. dtto, paramere. Scale = 0.2 mm (129) and 0.1 mm (130, 131).

Scaphisoma morosum sp. n.

Holotype ♂: Chiang Mai, road to Wab Pang An, ravine, 50 km NE Chiang Mai (via Chiang Rai), 900 m, 3.XI.85 (MHNG).

Paratypes: 1 ♂, Chiang Mai, Doi Suthep, 1400 m, 5.XI.85; 1 ♂, Doi Suthep, 1090 m, 2.XII.85 (Schwendinger); 3 ♂, Doi Suthep, III.87 (Rougemont); 1 ♂, Doi Inthanon, ravine near Forestry Department, 1250 m, 6.XI.85; 1 ♂, Doi Chiang Dao, 450 m, 7.V.87 (Schwendinger); 1 ♂, Doi Angkhang, 10 km W Fang, 1500 m, 20.III.87 (Schwendinger); 1 ♂, Khao Yai Nat. Park, Khao Khieo, 1150 m, 28.XI.85; 1 ♂, Burma, Shane State, Kalew, 1300 m, 19.III.82 (Rougemont); 1 ♂, Burma, Shane State, Taunggyi, 18.III.82 (Rougemont) (all MHNG).

Length 1.65-1.80 mm, width 1.10-1.20 mm. Extremely similar to the preceding species, as well as to *tortile* and *prehensor.* The pale apical portion of elytron is usually narrowed, about as long as 1/4 of the maximal elytral length but in two specimens it is as long as 1/3 of elytral length, and the medio-apical portion of the metasternum is finer punctate. The species may be distinguished only by the eadeagus (Figs 129 to 131) which is 0.71-0.84 mm long. The internal sac is similar to that in cf. *bedeli* (Löbl 1986*c*) but the apical sclerotized teeth are smaller, less numerous and apparently straight. The parameres being gradually narrowed from the enlarged base to apical curved portion differ notably from those in the latter species.

Scaphisoma karen sp. n.

Holotype ♂: Chiang Mai, Doi Inthanon, 1650 m, ravine, 7.XI.85 (MHNG).

Paratypes: 20 ♂, as holotype; 6 ♂, same data but 1750 m; 2 ♂, Chiang Mai 2 ♂, Doi Inthanon, 1630 m, 25.II.87 (Schwendinger); 1 ♂, Doi Inthanon, 1780 m, 3.III.87 (Schwendinger); 1 ♂, Doi Pui, 1500 m, north slope, 19.XII.88 (Trautner & Geigenmüller); 4 ♂, Doi Suthep, 1550 m, north slope, 4.XI.85; 1 ♂, same data but 1400 m, 5.XI.85 (MHNG, SMNS).

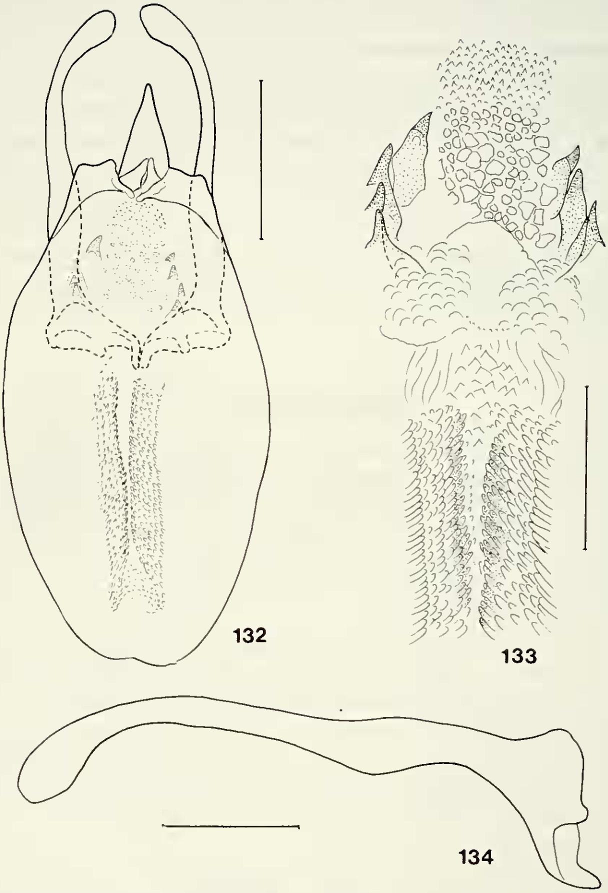
Material not included in type series: 33 ♀, Doi Inthanon, 1650 m and 2 ♀ 1720 m; 3 ♀, Doi Suthep 1550 m and 1 ♀, 1450 m (MHNG).

Length 1.65-1.90 mm, width 1.08-1.30 mm, aedeagus 0.68-0.86 mm long. Body dark reddish brown to blackish, pronotum often somewhat paler than most of elytral surface. Elytra with pale brown to yellowish apical portion not quite as long as 1/3 of elytron on inner half, and longer than 1/3 of elytron on outer half. Antennae long, relative length of antennomeres in holotype as: III 6, IV 20, V 26, VI 23, VII 26, VIII 22, IX 26, X 24, XI 30. Diagnostic relevant characters as in the preceding species and in *tortile-prehensor,* but metasternum often very shallowly impressed in centre, and row of punctures in front of metacoxa relatively fine.

The species seems to be closely related to *necopinum* Löbl with which it shares a similar aedeagus (Figs 132-134). The parameres are sinuate and enlarged postbasally and apically in *karen* while in *necopinum* they are evenly large in basal half (the base excepted). The structures of the internal sac are also significantly distinct from those in *necopinum* or in other members of the *haemorrhoidale*- group.

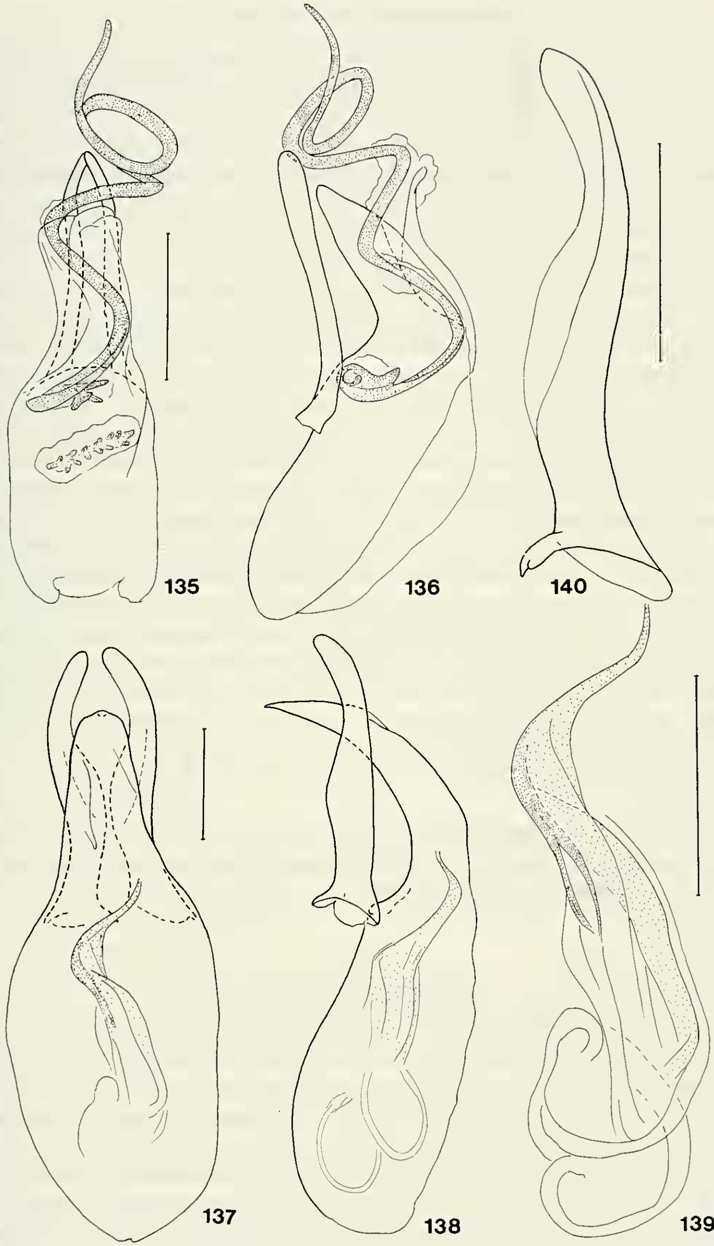
Baeotoxidium Löbl

Members of this genus may be separated from *Baeocera* by fairly approximate meso- and metacoxae, and differ from *Scaphobaeocera* by the elytra lacking parasutural striae. Five species confined to Sri Lanka and India have been described up to date. A further species occurs in Thailand.



FIGS 132 to 134.

132. *Scaphisoma karen* sp. n., paratype from Doi Inthanon, aedeagus; 133. dtto, internal sac; 134. dtto, paramere. Scale = 0.2 mm (132) and 0.1 mm (133, 134).



FIGS 135-140.

135 and 136. *Baeotoxidium siamense* sp. n., holotype, aedeagus with extruded flagellum; 137 and 138. *Scaphobaeocera laevis* sp. n., holotype, aedeagus; 139. dtto, internal sac; 140. dtto, paramere. Scale = 0.1 mm.

Baeotoxidium siamense sp. n.

Holotype ♂: Chiang Mai, 33 km NE Chiang Mai (via Chiang Rai) cca 500 m, 3.XI.85 (MHNG).

Paratypes: 3 ♀, Khao Yai Nat. Park, hills east of Heo Suwat Waterfalls, 800-900 m, 1.XII.85 (MHNG).

Length 1.2-1.3 mm, dorsoventral diameter 0.73-0.77 mm; pronotum 0.73-0.77 mm wide at base; elytra 0.85-0.91 mm long, combined 0.77-0.90 mm wide. Body dark reddish brown, apical segments of abdomen, tarsi and antennae yellowish. Antennae long, relative length of segments: III 10, IV 15, V 16, VI 16, VII 16, VIII 15, IX 17, X 18, XI 23 (holotype). Segments III to VI slender, almost of same width, VII about 3,5 × longer than wide, fairly wider than VI or VIII, VIII just slightly wider than VI, well 4 × longer than wide; XI 3 × longer than wide, wider than VII. Pronotal punctation very fine, visible at × 50 magnification. Point of scutellum exposed. Elytra not flattened in lateral view; sutural stria deep, extended along basal margin and joint with lateral stria; interval between sutural margin and sutural stria not (holotype) or moderately elevated (paratypes); discal punctation very fine and sparse on most of the surface, several relatively coarse punctures forming sometimes irregular rows on anterior half of elytron. Hypomeron lacking longitudinal ridge or stria. Punctation on lateral portion of metasternum sparse and very fine, that on middle portion rather coarse and dense, small median area in anterior half and posterior intercoxal process smooth. Mesocoxal area 0.03 mm long, with coarse, elongate marginal punctures extending laterally almost to middle of mesepimeron. Metepisternum almost flat, 0.10 mm wide, internal suture deeply impressed and rounded anteriorly. First ventrite as metasternum not microsculptured, basal punctures coarse and somewhat elongate, coarser than marginal punctures of mesocoxal areas (holotype) or about as coarse as latter (paratypes). Following ventrites and visible tergites with microsculpture consisting of punctures. Tibiae straight, metatibiae 0.38-0.40 mm long.

Male. Segments 1 to 3 of protarsi slightly enlarged. Aedeagus (Figs 135 and 136) 0.31 mm long.

This species may be easily distinguished by the elytron with complete sutural stria joint to the lateral stria. Besides, it differs drastically in having a much longer flagellar sclerit of internal sac of aedeagus than that in other species.

Scaphobaeocera Csiki

This genus differs from other scaphidiids having approximate meso- and metacoxae by the elytron with a parasutural stria. In most of the species the body is dorsally and ventrally microsculptured, and usually at least the elytra are iridescent. The microsculpture consist always of transverse striae, and the punctation is similar in most species. All *Scaphobaeocera* have small mesocoxal areas which are usually 0.02-0.03 mm long, and margined with fine or very fine punctures (in *inculta* marginal punctured are coarse, in *obducta* the mesocoxal areas are 0.04 mm long). Besides aedeagal characters only few other features may be used to distinguish the species. Therefore, relatively many specimens from the Thai collections could not be identified and are not included in the present study.

Scaphobaeocera is distributed over warm temperate and tropical Asia (from Pakistan to Japan), Melanesia, Micronesia, Australia, the Afrotropical region, and the Mascarene and Seychelles islands. So far 46 species have been named, further 12 are described below.

KEY TO THE THAI *Scaphobaeocera*

1 Hypomeron with longitudinal stria 2
— Hypomeron without stria 7
2 Apical antennal segment about 2× longer than penultimate segment. Small species, 0.90-1.20 mm long 3
— Apical antennal segment about 1.1 to 1.6× longer than penultimate. Usually larger species 4
3 Internal sac of aedeagus with spiral flagellum forming 4 complete circles .... *dorsalis*
— Flagellum of internal sac more or less spiral, forming 1 or 2 circles .... *delicatula*
4 Antennal segment VII distinctly longer than VI 5
— Antennal segment VII as long as segment VI 6
5 Length 1.6 mm, body reddish brown .... *robustula*
— Length 1.1 mm, body blackish .... *uncata*
6 Pronotum finer punctate than lateral portion of metasternum. Length 1.8-1.9 mm .... *valida*
— Lateral portion of metasternum as finely punctate as pronotum. Length 1.40-1.45 mm .... *burckhardti*
7 Apical antennal segment somewhat shorter or as long as penultimate and distinctly shorter than segment IX .... *spinigera*
— Antennal segment XI longer than segment X or IX 8
8 Body blackish, elytron with reddish spot and very narrowly yellowish apex .... *maculata*
— Colour pattern different 9
9 Body dark reddish brown to blackish, elytron with 2 paler transverse bands .... *alticola*
— Colour pattern different 10
10 Anterior metasternal margin with 2 or 3 coarse elongate punctures, similar punctures margining mesocoxal area .... *discreta*
— Anterior metasternal margin impunctate, mesocoxal area margined with fine, not or barely elongate punctures 11
11 Pronotum and elytra not microsculptured .... *laevis*
— Elytra and usually pronotum microsculptured 12
12 Lateral portions of metasternum and 1st ventrite not microsculptured .... *nuda*
— Lateral portions of metasternum and 1st ventrite microsculptured 13
13 Anterior portion of metasternum with a median stria 14
— Metasternum lacking median stria 15
14 Flagellum forming 3 or 4 complete circles .... *difficilis*
— Flagellum forming 6 complete circles .... *spira*
15 Parameres of aedeagus subapically notched .... *incisa*
— Parameres not notched 16
16 Lateral wal of median lobe extended apically behind level of articular process .... *nobilis*
— Median lobe of aedeagus different 17
17 Articular process of median lobe strongly protruding apically .... *tenella*
— Articular process of median lobe small or indistinct, not protruding apically

. . . . 18

18 Antennal segments III and VIII slender, each more than 3 × longer than wide, III only somewhat shorter than IV . . . . *sabapensis*

— Antennal segments III and VIII shorter, III much shorter than IV 19

19 Antennal segment V longer than VI. Small species 1.0-1.05 mm long . . . . . *obducta*

— Antennal segments V and VI evenly long or VI barely shorter than V. Larger species 1.3-1.4 mm long . . . . *minuta*

Scaphobaeocera laevis sp. n.

Holotype ♂: Chiang Mai, Doi Suthep, 1450 m, south slope, 4.XI.85 (MHNG).

Paratypes: 2 ♀, as holotype; 3 ♂, Doi Suthep, 1550 m, north slope, 4.XI.85; 1 ♀, Doi Inthanon, near Forestry Department, 1250 m, 6.XI.85 (MHNG).

Material not included in type series: 1 ♀, Mae Hong Son, Tham Lok Forest Park, 8 km N Sop Pong, 700 m, 11. and 13.XI.85 (MHNG).

Length 1.2 to 1.4 mm, width 0.73-0.77 mm, dorsoventral diameter 0.66-0.78 mm. Body reddish brown, femora and tibiae barely paler, tarsi and antennae yellowish. Dorsal and ventral surface of body not microsculptured and not iridescent. Relative length of antennal segments: III 6, IV 14, V 17, VI 17, VII 16, VIII 12, IX 16, X 15, XI 22 (holotype); III relatively short, about 1.5 × longer than wide; IV to VI evenly wide, IV well 4 ×, V and VI about 5 × longer than wide; VII much wider than VI, about 2.5 × longer than wide; VIII fairly wider than VI, about 2.5 × longer than wide; XI somewhat wider than VII, 3 × longer than wide. Pronotal punctation very fine, barely visible at 50 × magnification. Hypomeral stria absent. Point of scutellum exposed. Elytra irregularly, finely punctate, punctures all over much coarser than pronotal ones; parasutural stria short, extremely shallow. Median portion of metasternum flat, apically densely and very finely punctate, with or without median impression. Lateral portions of metasternum and 1st ventrite evenly sparsely and very finely punctate. Metepisternum flat, evenly 0.06-0.09 mm wide, with straight inner suture. Tibiae straight.

Sexual characters of male. Segments 1 to 3 of protarsi strongly enlarged, narrower than tibia. Aedeagus (Figs 137 to 140) 0.50-0.55 mm long.

This species exhibits an unusual type of internal sac of the aedeagus and thus appears to represent an isolated group. Besides, it may be distinguished from other Asian species by the shape of the parameres and by the dorsal surface of body lacking microsculpture.

The female from Mae Hong Son, Tham Lok Forest Park, 8 km N Sop Pong differs slightly from *laevis* by its smaller size (1.1 mm) and by convex centre of metasternum which is densely punctate only on a very narrow area.

Scaphobaeocera nuda Löbl

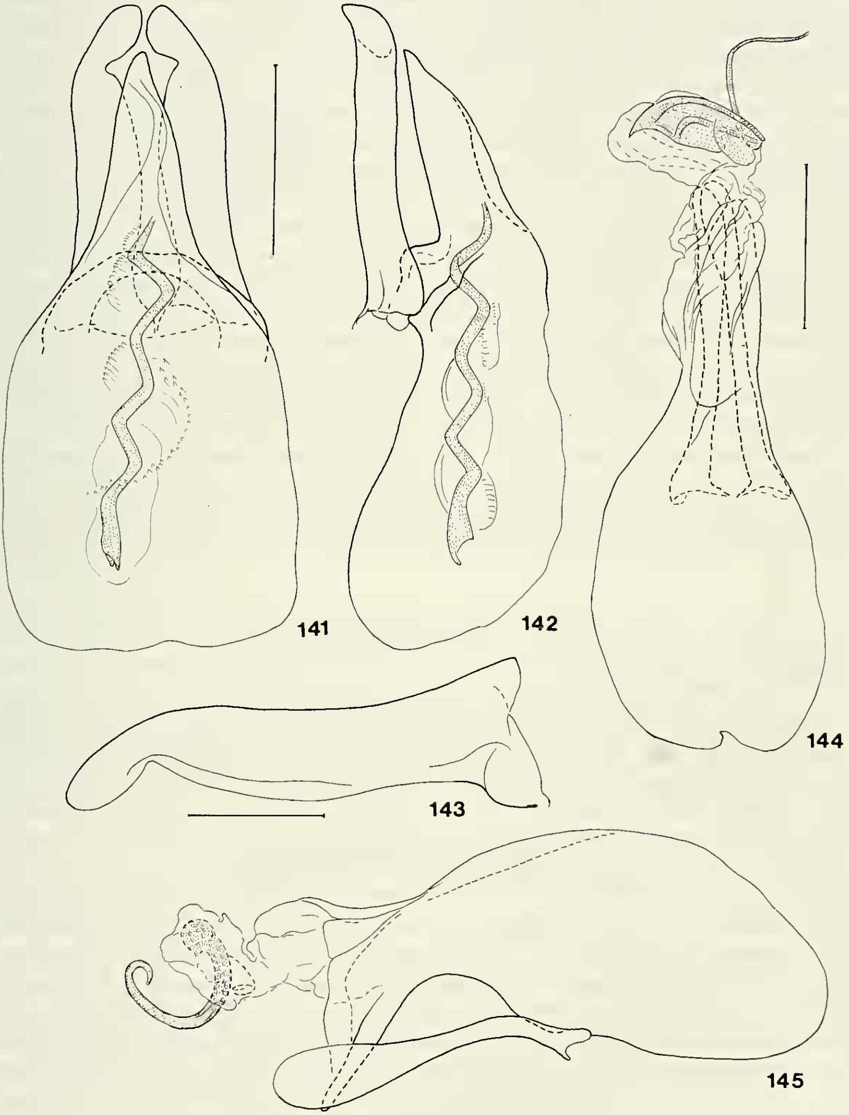
Scaphobaeocera nuda Löbl, 1979*a*: 117; Löbl, 1984*a*: 84.

Material examined: 10, Mae Hong Song, Tham Lok Forest Park, 8 km N Sop Pong, 700 m, 11. and 13.XI.85; 6, Chiang Mai, Doi Suthep, 1050 and 1450 m, 4.-5.XI.85; 1, Doi Pui, 1660 m, 17.XI.86 (Schwendinger); 4, Doi Inthanon, 1250 and 1720 m, 6.-7.XI.85; 1, below Mae Nang Khao, 900 m, 54 km NE Chiang Mai (via Chiang Rai), 3.XI.85; 1, Khao Yai Nat. Park, hills E Heo Suwat Waterfalls, 800 m, 1.XII.85; 2, Chanthaburi, Khao Sabap Nat. Park, near Phliu Waterfalls, 150-300 m, 23.-24.XI.85 (all MHNG).

Distribution: India, Thailand. — New to Thailand.

Scaphobaeocera incisa sp. n.

Holotype ♂: Chiang Mai, road to Wab Pang An, 50 km NE Chiang Mai (via Chiang Rai), 900 m, 3.XI.85 (MHNG).



FIGS 141 to 145.

141 and 142. *Scaphobaeocera incisa* sp. n., holotype, aedeagus; 143. dtto, paramere; 144 and 145. *Scaphobaeocera alticola* sp. n., paratype, aedeagus with extruded internal sac. Scale = 0.1 mm (141, 142, 144, 145) and 0.05 mm (143).

Paratypes: 2♂, 9♀, Chiang Mai, Mae Nang Kaeo, 54 km NE Chiang Mai (via Chiang Rai), 3.XI.85; 3♂, 1♀, Doi Suthep, 1210 m, 30.I.87 (Schwendinger) (all MHNG).

Length 1.30-1.45 mm, width 0.72-0.78 mm, dorsoventral diameter 0.73-0.79 mm. Body, femora and tibiae ochreous or reddish brown. Apex of abdomen and tarsi somewhat paler, antennae yellowish. Pronotum and elytra iridescent. Relative length of antennal segments: III 8, IV 14, V 18, VI 16, VII 16, VIII 14, IX 18, X 18, XI 28 (holotype); segments III and IV about evenly wide, III 2,5×, IV 4× longer than wide; V and VI evenly wide, somewhat wider than IV, V 4.5×, VI 4× longer than wide; VII much wider than VI, somewhat more than 2× longer than wide; VIII 3× longer than wide, wider than VI; XI 3.5× longer than wide, wider than VII. Pronotum, elytra, mesepisternum, mesepimeron, lateral portions of metasternum and 1st ventrite microsculptured, microsculpture sometimes extremely fine, visible at higher magnification (over 100×). Punctation on pronotum sparse and very fine, barely visible at 50× magnification. Hypomeral stria absent. Elytron with well marked parasutural stria; punctation very fine, distinctly coarser and denser than that on pronotum, on apical area denser and coarser than on centre. Metasternum lacking median impression, with convex and impunctate centre; medio-apical area of metasternum flat, densely and finely punctate; lateral portions of metasternum and 1st ventrite sparsely and very finely punctate. Metepisternum flat, 0.05-0.07 mm wide, inner suture straight or barely concave. Tibiae straight.

Sexual characters of male. Segments 1 to 3 of protarsi enlarged, 1 and 2 somewhat, 3 distinctly narrower than tibia. Aedeagus (Figs 141 to 143) 0.29-0.34 mm long.

This species may be distinguished by the shape of the subapically notched parameres, and by the relatively long strongly sclerotized articular process of the median lobe.

Scaphobaeocera maculata sp. n.

Holotype ♀: Chanthaburi, Khao Sabap Nat. Park, near Phliu Waterfalls, 150-300 m, 23.-24.XI.85 (MHNG).

Length 1.3 mm, width 0.71 mm, dorsoventral diameter 0.73 mm. Body black, elytron with a reddish oblique spod on anterior half (apically approximate to sutural stria), and narrowly yellowish apex; apex of first and second ventrite and following ventrites and visibles tergites, and legs ochreous, antennae ochreous, with segments I to VI paler than following. Pronotum and elytra distinctly iridescent and microsculptured. Mesepimeron, metasternum and ventrites distinctly microsculptured. Relative length of antennal segments: III 8, IV 11, V 12, VI 9, VII 13, VIII 7, IX 15, X 16, XI 23; III almost 3× longer than wide, IV about as wide as III, somewhat more than 3× longer than wide; V and VI almost evenly wide, V 3× longer than wide, VI 2× longer than wide; VII 2× longer than wide; VIII about 1.5× longer than wide, narrower than VII but wider than VI; XI about 3× longer than wide, notably wider than VII. Hypomeral stria absent. Point of scutellum exposed. Elytron with parasutural stria obsolete on anterior third. Punctation on pronotum and elytron very fine, visible at 24× magnification, on apical portion of elytron somewhat coarser. Metasternum very finely punctate on lateral portion and on anterior half of median area, very densely and relatively coarsely punctate on apical half of median area; centre with a deep elongate-foveiform impression narrowed anteriorly and continuing as a stria. Metepisternum evenly 0.07 mm wide, flat, with straight inner suture. Tibiae straight.

This species may be readily distinguished by its conspicuous colour pattern.

Scaphobaeocera alticola sp. n.

Holotype ♂: Chiang Mai, Doi Inthanon, 2500 m, 23.X.86 (Schwendinger) (MHNG).

Paratypes: 3♂, 2♀ as holotype; 1♂, Doi Inthanon, 2500 m, 9.II.86 and 2♀, 2530 m, 16.II.-18.IV.87, pit-fall trap and VIII.87 (Schwendinger); 1♀, Doi Inthanon, 2500 m, 1.VIII.85 (Deharveng); 1♀, Doi Inthanon, 2500 m, 9.XI.85 (all MHNG).

Length 1.2-1.5 mm, width 0.64-0.76 mm, dorsoventral diameter 0.67-0.78 mm. Head and pronotum dark reddish brown to blackish. Most of elytron as dark as or darker than pronotum, but two reddish transverse fasciae more or less paler; anterior fascia basal, posterior lying between middle and apical fourth of elytron; apical margin of elytron narrowly yellowish. Ventral side of thorax and 1st ventrite dark reddish brown, following ventrites usually paler, apex of abdomen, legs and antennal segments I to VI ochreous, segments VII to XI somewhat darkened. Pronotum not, elytra distinctly iridescent. Microsculpture on pronotum almost obsolete, that on elytra, mesepisternum, mesepimeron, metasternum and abdomen distinct. Relative length of antennal segments: III 9, IV 13, V 15, VI 14, VII 15, VIII 10, IX 15, X 15, XI 22 (holotype); III less than 3× longer than wide; IV about 4× longer than wide, as wide as III; V and VI somewhat wider than IV, V about 4× longer than wide, VI 3.5× longer than wide; VII 2.5× longer than wide; VIII 2× longer than wide, wider than VI, decidedly narrower than VII; XI somewhat more than 2× longer than wide, much wider than VII. Hypomeral stria absent. Minute point of scutellum exposed. Punctation on pronotum and elytra very fine, on apical portion of elytra somewhat coarser than on elytral centre. Parasutural stria distinct except on anterior fourth of elytron. Median area of metasternum flat, without any impression or stria, rather densely and coarsely punctate, except on glabrous centre. Lateral portion of metasternum very finely punctate. Metepisternum flat, 0.04-0.05 mm wide anteriorly and apically, somewhat narrowed in middle; inner suture somewhat concave. Tibiae straight.

Sexual characters of male. Segments 1 to 3 of protarsi rather strongly enlarged, narrower than apex of tibia. Aedeagus (Figs 144 and 145) 0.32-0.34 mm long.

This species may be readily identified by its colour pattern. The internal sac of the aedeagus, unfortunately extruded in all examined specimens, has a complex base and moderately long, slender flagellum. A similar condition is found in several species, i.e. *timida* Löbl, *dispar* Löbl, *tibialis* Löbl, *formosana* (Achard) which all differ in the shape of the parameres and in the combination of external character.

Scaphobaeocera dorsalis Löbl

Scaphobaeocera dorsalis Löbl, 1980: 118; 1984*a*: 91.

Material examined: 1, Khao Yai Nat. Park, 750-850 m, 26.XI.-3.XII.85; 2, Chiang Mai, Chiang Dao, 450 m, 5.-11.IV.58 (Maa) (MHNG, BMH).

Distribution: North India, Thailand, Taiwan. — New to Thailand.

Remarks. Only males are identified and recorded here. I have not found any character to distinguish females of *dorsalis* from *delicatula* having a relatively short apical antennal segment.

Scaphobaeocera delicatula Löbl

Scaphobaeocera delicatula Löbl, 1971: 986.

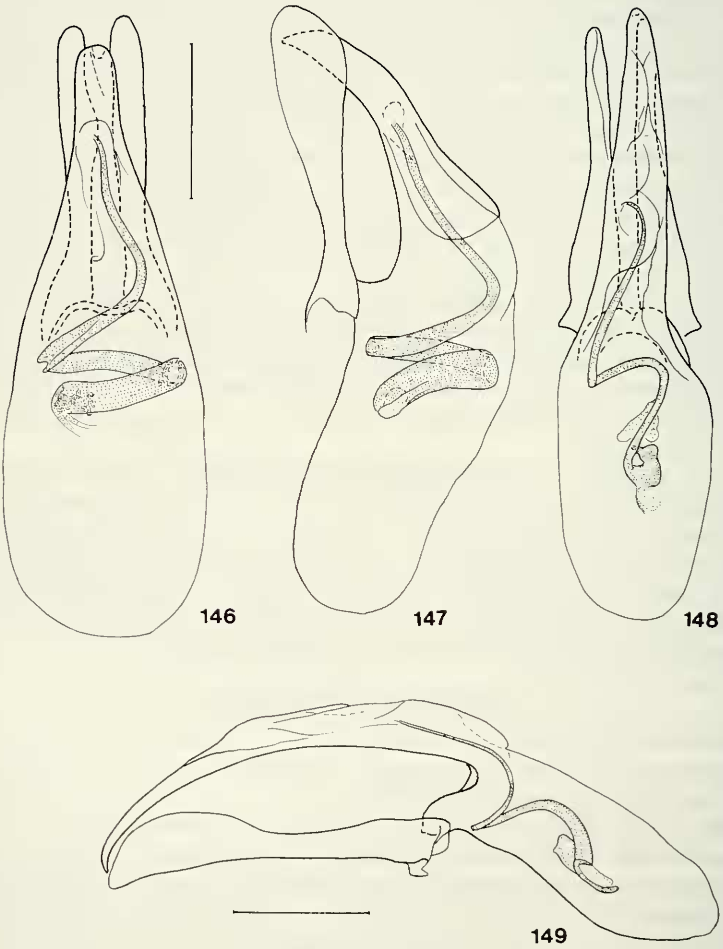
Material examined: 10, Khao Yai Nat. Park, 750-850 m, 26.XI.-3.XII.85; 1, Khao Yai Nat. Park, hills east Heo Suwat Waterfalls, 900 m, 1.XII.85; 1, Chanthaburi, Khao Sabap Nat. Park, near Phliu Waterfalls, 150-300 m, 23.-24.XI.85 (all MHNG).

Distribution: Sri Lanka, Thailand. — New to Thailand.

Remarks. The length of the apical antennal segment is notably variable, about 3 to more than 4× longer than wide and about as long as the two preceding segments to almost as long as the three preceding segments together.

Scaphobaeocera sabapensis sp. n.

Holotype ♂: Chanthaburi, Khao Sabap Nat. Park, 150-300 m, 23.-24.XI.85 (MHNG).
Paratypes: 5♂, 1♀ as holotype (MHNG).



FIGS 146 to 149.

146 and 147. *Scaphobaeocera sabapensis* sp. n., holotype, aedeagus; 148 and 149. *Scaphobaeocera uncata* sp. n., aedeagus, holotype. Scale = 0.1 mm.

Length 1.15-1.30 mm, width 0.61-0.65 mm, dorsoventral diameter 0.68-0.72. Body, femora and tibiae reddish brown, apical abdominal segments, tarsi and antennae yellowish. Pronotum, elytra, mesepisternum, mesepimeron, lateral portions of metasternum and abdomen microsculptured and iridescent. Microsculpture very fine, sometimes barely visible at 100× magnification. Antennae long, relative length of segments: III 12, IV 14, V 15, VI 16, VII 17, VIII 14, IX 19, X 18, XI 21 (holotype); segments III slender, more than 3× longer than wide; IV to VI evenly wide, somewhat narrower than III, IV about 4× longer than wide, VI almost 5× longer than wide; VII notably wider than III but slender, about 3.5× longer than wide; VIII somewhat wider than III, 3.5× longer than wide; XI 3× longer than wide. Pronotal punctation very fine, distinct at 50× magnification. Hypomeral stria absent. Point of scutellum exposed. Elytral punctation less fine than that on pronotum, near apex not coarser than on centre; parasutural stria relatively deep, extended fairly far anteriorly. Median portion of metasternum very densely and very finely punctate, with shallow elongate impression; median stria absent. Lateral portion of metasternum sparsely and very finely punctate. Metepisternum more or less vaulted, 0.05-0.06 mm wide anteriorly, somewhat narrowed apically, inner suture deep, straight or somewhat rounded apically. Lateral portion of 1st ventrite still finer punctate than that of metasternum. Tibiae straight.

Sexual characters of male. Segments 1 to 3 of protarsi enlarged, narrower than apex of tibia. Aedeagus (Figs 146 to 147) 0.38-0.41 mm long.

S. sabapensis may be distinguished from similar species by the conspicuously slender antennal segments III and VIII, in combination with medially impressed metasternum.

Scaphobaeocera nobilis Löbl

Scaphobaeocera nobilis Löbl, 1984*a*: 91.

Material examined: 7, Khao Yai Nat Park, near Headquarters, 750-850 m, 26.XI.-3.XII.85; 2, Chiang Mai, Doi Suthep, 800 m, 12.V.86 (Schwendinger); 1, Doi Suthep, 1210 m, 30.I.87 (Schwendinger); 1, Doi Suthep, Mahidol Waterfalls, 1100 m, 20.II.87 (Schwendinger) (all MHNG).

Distribution: Bhutan, Thailand. — New to Thailand.

Remarks. These specimens are almost identical in external and genital characters.

Scaphobaeocera minuta (Achard)

Toxidium minutum Achard, 1919: 364.
Scaphobaeocera minuta; Löbl, 1971: 989; 1984*a*: 86.

Material examined: 11, Khao Yai Nat. Park, 750-850 m, 26.XI.-3.XII.85 (MHNG).

Distribution: North India, Thailand. — New to Thailand.

Remarks. The shape of the enlarged base of the flagellum in the four Thai males examined differs slightly from that in the two available males from North India. In absence of other distinctive characters the Thai specimens are believed to be conspecific with the Indian ones.

Scaphobaeocera difficilis Löbl

Scaphobaeocera difficilis Löbl, 1979*a*: 113; 1986*a*: 88; 1986*c*: 350.

Material examined: 3, Chiang Mai, below Mae Nang Kaeo, 54 km NE Chiang Mai (via Chiang Rai), 900 m, 3.XI.85; 1, Doi Angkhang, 10 km W Fang, 1650 m, 22.IV.87 (Schwendinger); 1, Doi Chiang Doa, 450 m, 7.V.87 (Schwendinger); 1, Chiang Dao, 700 m, forest near cave, 27.XII.80 and

1, Doi Chiang Dao, 1500 m, 21.XII.80 (Deharveng & Gouze); 1, Doi Pui, 1500 m, north slope, 19.XII.88 (Geigenmüller & Trautner); 1, Doi Suthep, 1090 m, 2.XII.85 (Schwendinger); 12, Doi Suthep, 1050 m, 1400 m, 1450 m and 1500 m, north and south slopes, 4.-5.XI.85; 3, Doi Inthanon, 2500 m, 9.XI.85 (MHNG, SMNS).

Distribution: India, Pakistan, Thailand. — New to Thailand.

Remarks. The median metasternal stria is variably deep. Sometimes it is very fine and difficult to see if the specimens are not properly mounted.

Scaphobaeocera discreta Löbl

Scaphobaeocera discreta Löbl, 1986*a*: 888; 1986*c*: 350.

Material examined: 1, Chiang Mai, Doi Angkhang, 10 km W Fang, 1500 m, 20.III.87 (Schwendinger) (MHNG).

Distribution: North India, Thailand. — New to Thailand.

Remarks. This species may be readily identified. Besides characters used in the key it has extremely small antennal segment VIII and not iridescent elytra.

Scaphobaeocera uncata sp. n.

Holotype ♂: "Thai, W. Tak IX" (Sedlacek) (MHNG).

Length 1.1 mm, width 0.61 mm, dorsoventral diameter 0.64 mm. Body blackish, antennae, femora and tibiae rather dark reddish brown, apex of abdomen and tarsi ochreous. Pronotum and elytra iridescent. Pronotum, elytra and abdomen rather distinctly microsculptured (100× magnification), metasternal microsculpture visible only at higher magnification, that on mesepisternum and mesepimeron almost obsolete. Relative length of antennal segments: III 7, IV 10, V 14, VI 10, VII 16, VIII 10, IX 17, X 16, XI 25; segment III almost 2× longer than wide; IV somewhat narrower than III, almost 3× longer than wide; V as wide as III, 3.5× longer than wide; VI wider than V, 2× longer than wide; VII notably wider than VI, somewhat more than 2× longer than wide; VIII somewhat wider than VI, almost 2× longer than wide; XI somewhat wider than VII, 3× longer than wide. Pronotal punctation very fine and sparse, barely visible at 50× magnification. Hypomeral stria distinct. Minute point of scutellum exposed. Elytral punctation very fine and sparse anteriorly, similar as the pronotal one, apically becoming coarser and denser, on apical portion still very fine although much coarser than on pronotum or elytral base; parasutural stria long and well visible. Median portion of metasternum convex, impunctate on centre, extremely finely and densely punctate on apical part, with relatively coarse punctures between meso- and metacoxa. Lateral portions of metasternum and 1st ventrite evenly extremely finely and sparsely punctate. Metepisternum flat, evenly 0.03 mm wide, inner suture straight. Tibiae straight.

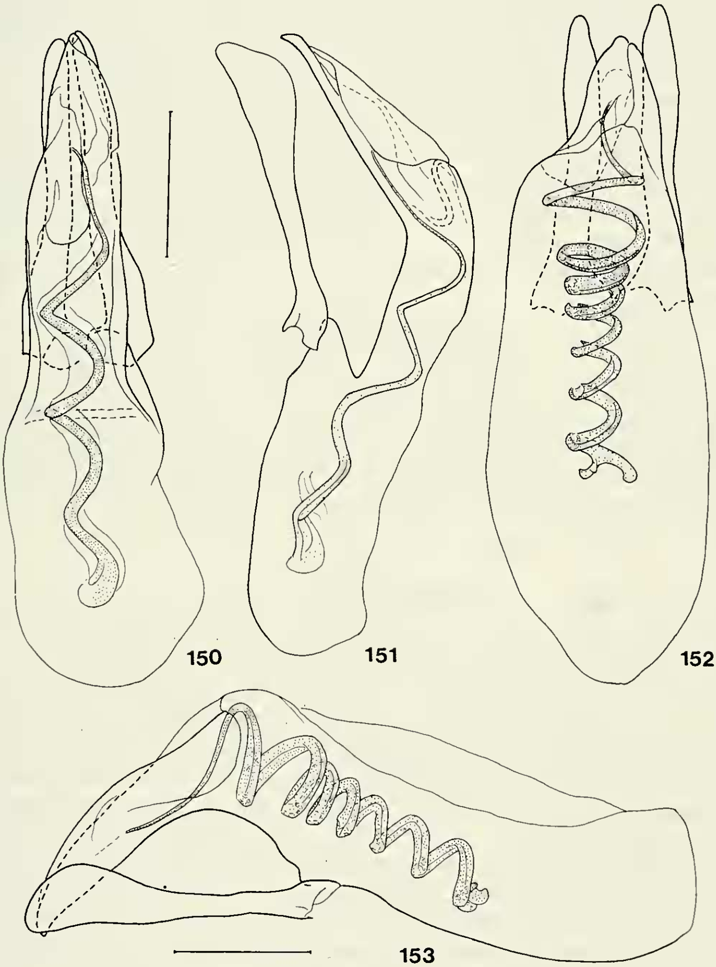
Sexual characters of male. Segments 1 to 3 of protarsi strongly enlarged, narrower than tibia. Aedeagus (Figs 148 and 149) 0.45 mm long.

This species is characterized by the slender aedeagus with articular processi apically expanded and with relatively short flagellum enlarged and hook-shaped at base. It may be readily distinguished from other small-sized species having distinct hypomeral stria by the relative length of the antennal segments.

Scaphobaeocera tenella sp. n.

Holotype ♂: Khao Yai Nat. Park, near Headquarters, 750-850 m, 26.XI.-3.XII.85 (MHNG).
Paratype ♂: India, Meghalaya, Khasi Hills, 16 km E Mawsynran, 1000 m, 27.X.78 (Besuchet, Löbl) (MHNG).

Length 1.15-1.20 mm, width 0.56-0.58 mm, dorsoventral diameter 0.62-0.65 mm. Body very dark reddish brown to blackish, legs and apical abdominal segments reddish brown, antennae yellowish. Pronotum, elytra and 1st ventrite distinctly iridescent. Pronotum, elytra, mesepisternum, mesepimeron, lateral portions of metasternum and



Figs 150 to 153.

150 and 151. *Scaphobaeocera tenella* sp. n., holotype, aedeagus; 152 and 153. *Scaphobaeocera spira* sp. n., holotype, aedeagus. Scale = 0.1 mm.

1st ventrite microsculptured. Relative length of antennal segments as: III 7, IV 10, V 12, VI 12, VII 12, VIII 8, IX 13, X 14, XI 19 (holotype). Segment III about 2× longer than wide; IV as wide as III, 3× longer than wide; V and VI barely wider than IV, each more than 3× longer than wide; VII distinctly wider than VI or VIII, somewhat more than 2× longer than wide; VIII about 1.5× longer than wide; XI notably wider than VII, somewhat more than 2× longer than wide. Pronotal punctation very fine, dense, well visible at × 50× magnification. Hypomeral stria absent. Scutellum almost completely covered by pronotal lobe. Elytral punctation very fine and dense, near base similar to than on pronotum, on apical portion notably coarser; parasutural stria distinct behind anterior third of elytron. Median portion of metasternum flat, very densely and finely punctate, with small and shallow impression in holotype, absent from paratype. Lateral portions of metasternum and 1st ventrite evenly very finely and sparsely punctate. Metepisternum flat, evenly 0.03 mm wide, with straight inner margin. Tibiae straight.

Sexual characters of male. Segments 1 to 3 of protarsi strongly enlarged, about as wide as tibia. Aedeagus (Figs 150 and 151) 0.40-0.42 mm long.

This species shares with *stipes* Löbl and *uncata* expanded and apically protruding articular processi of the median lobe. It differs drastically from both by the shape of the flagellum which is conspicuously long and in basal half apparently sinuate (in the paratype forming distinct apical circles).

The Indian specimen was not treated in LÖBL, 1984*a*, because its aedeagus was thought anomalous.

Scaphobaeocera spinigera Löbl

Scaphobaeocera spinigera Löbl, 1979*a*: 116; 1984*a*: 91; 1986*c*: 349.

Material examined: 1, Chiang Mai, Doi Angkhang, 10 km W Fang, 1460 m, 21.V.86 and 6, 1500 m, 30.X.87 (Schwendinger); 2, Mae Nang Kaeo, 950 m, 54 km NE Chiang Mai (via Chiang Rai), 3.XI.85; 4, Doi Suthep, 1050, 1400, 1450 and 1550 m, 4.-5.XI.85; 2, Doi Inthanon, 1250 and 1650 m, 6.-7.XI.85; 1, Doi Inthanon, 1760 m, 3.III.87 (Schwendinger) (all MHNG).

Distribution: North Pakistan, India, Thailand. — New to Thailand.

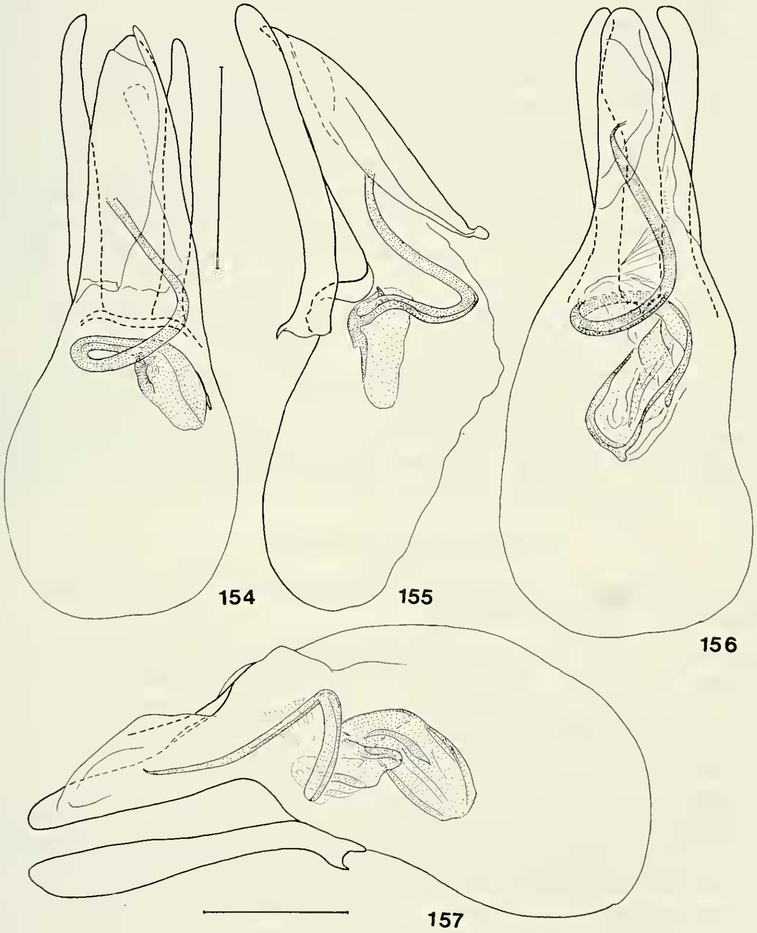
Scaphobaeocera spira sp. n.

Holotype ♂: Khao Yai Nat. Park, near Headquarters, 750-850 m, 26.XI.-3.XII.85 (MHNG).
Paratype ♀: Khao Yai Nat. Park, Khao Kieo, 1150 m, 28.XI.85 (MHNG).

Length 1.45-1.50 mm, width 0.78 mm, dorsoventral diameter 0.83-0.86 mm. Body blackish, apex of abdomen and legs ochreous or reddish brown, antennae yellowish. Pronotum, elytra and ventrites iridescent. Microsculpture on pronotum, elytra and abdomen very fine, barely visible at 100× magnification, that on mesepisternum, mesepimeron and metasternum still finer, distinct at 180× magnification. Relative length of antennal segments: III 8; IV 12, V 12, VI 10, VII 16, VIII 9, IX 16, X 18, XI 23 (holotype); segment III about 2× longer than wide; IV as wide as III, 3× longer than wide; V barely wider than IV; VI somewhat more than 2× longer than wide, wider than V; VII more than 2× longer than wide; VIII not quite 2× longer than wide, somewhat wider than VI; XI about 2.5× longer than wide, much wider than VII. Hypomeral stria absent. Punctation on pronotum and elytron evenly very fine but apical portion of elytron with points somewhat coarser. Distal part of scutellum exposed. Parasutural stria very shallow, obsolet on anterior third of elytron. Lateral portions of metasternum and 1st ventrite evenly very finely punctate. Middle portion of metasternum flat, with a median stria in anterior half. Tibiae straight.

Sexual characters of male. Segment 1 and 2 of protarsi strongly enlarged, almost as large as apex of tibia. Segment 3 of protarsi enlarged, narrower than 2 or 1. Aedeagus (Figs 152 and 153) 0.49 mm.

This species shares with *confusa* Löbl (from Queensland) the flagellum forming six complete circles and the apically widened parameres (lateral view). Its differs however from the latter by slender distal part of median lobe of aedeagus which is ventrally concave. Besides, *spira* may be readily distinguished from *confusa* by larger size of the body, microsculpture on the dorsal surface and metasternum with a median stria.



FIGS 154 to 157.

154 and 155. *Scaphobaeocera obducta,* holotype, aedeagus; 156 and 157. *Scaphobaeocera validia* sp. n., holotype, aedeagus. Scale = 0.1 mm.

Scaphobaeocera obducta sp. n.

Holotype ♂: Khao Yai Nat Park, near Headquarters, 750-850 m, 26.XI.-3.XII.85 (MHNG).
Paratype ♂: as holotype (MHNG).

Length 1.0-1.05 mm, width 0.60-0.63 mm, dorsoventral diameter 0.61-0.65 mm. Body blackish, apical abdominal segment, femora and tibiae reddish brown. Tarsi and antennae paler, almost yellowish. Body not iridescent. Thoracic microsculpture extremely fine, barely distinct at 180× magnification, that on elytra and abdomen visible at 90× magnification. Antennae short, relative length of segments: III 7, IV 10, V 12, VI 10, VII 13, VIII 9, IX 14, X 13, XI 20 (holotype); segment III about 2× longer than wide; IV barely slender than III, well 3× longer than wide; V and VI as wide as III, V 4× longer than wide, VI 3× longer than wide; VII not quite 3× longer than wide, notably wider than VI, VIII somewhat wider than VI, more than 2× longer than wide; XI much wider than VII, almost 3× longer than wide. Pronotal and elytral punctation sparse and almost evenly extremely fine. Hypomeral stria absent. Minute point of scutellum exposed. Parasutural stria of elytron very shallow. Median portion of metasternum flat, not impressed and without stria, all over very densely and finely punctate. Lateral portions of metasternum and 1st ventrite very sparsely and extremely finely punctate. Mesocoxal area relatively large, 0.04 mm long, with coarse marginal punctured. Metepisternum flat, 0.05-0.06 mm wide apically, narrowed anteriorly, with straight inner suture. Tibiae straight.

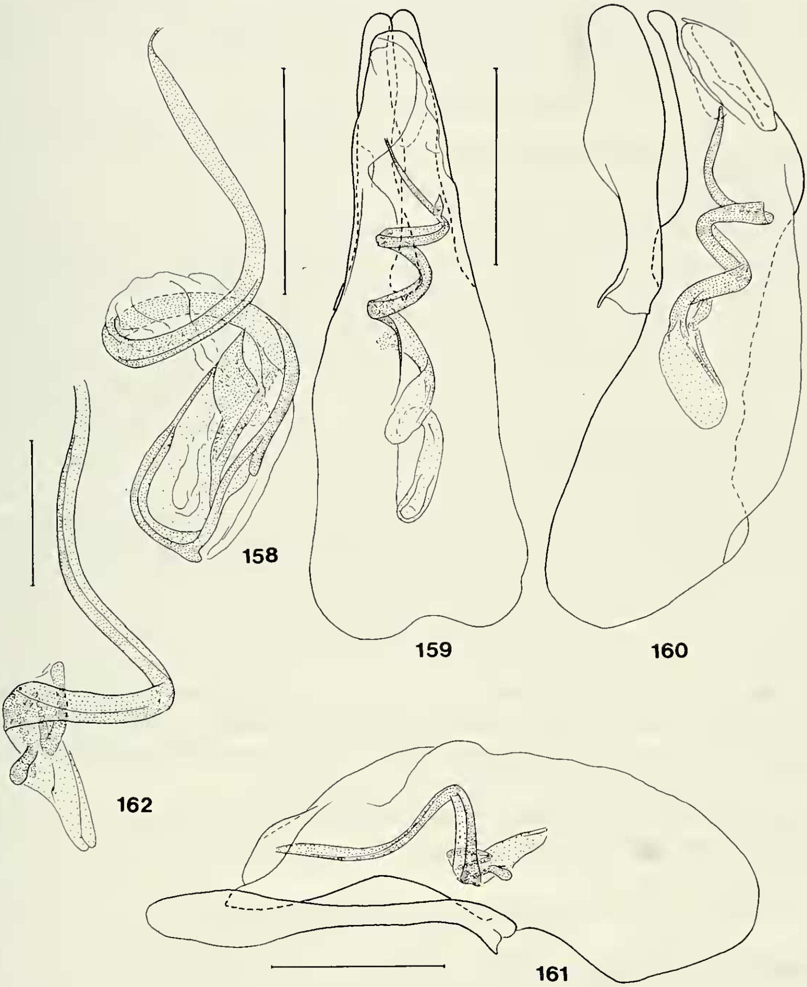
Sexual characters of male. Segments 1 to 3 of protarsi distinctly enlarged, narrower than tibiae. Aedeagus (Figs 154 and 155) 0.26-0.27 mm long.

S. obducta may be distinguished from other species of similar size by the combination of following characters: body not iridescent, blackish, apical antennal segment about 1.5× longer than penultimate, mesocoxal area 0.04 mm long, parameres of aedeagus almost evenly wide (lateral view), flagellum forming a single circle, and its conspicuously enlarged base bearing a distally protruding denticle.

Scaphobaeocera valida sp. n.

Holotype ♂: Khao Yai Nat. Park, hills east of Heo Suwat Waterfalls, 900 m, 1.XII.85 (MHNG).
Paratypes: 2♀ as holotype (MHNG).

Length 1.8-1.9 mm, dorsoventral diameter 1.02-1.05 mm, elytra combined 1.02-1.08 mm wide. Body rather pale reddish brown. Apex of abdomen, legs and antennae somewhat paler than body. Pronotum and elytra iridescent and distinctly microsculptured. Antennae long, relative length of segments: III 9, IV 19, V 22, VI 21, VII 22, VIII 9, IX 22, X 22, XI 28 (holotype); segments III to VI slender, almost evenly wide; III almost 2× longer than wide, IV to VI each about 4× longer than wide; VII almost 3× longer than wide; VIII somewhat wider than VI, about 1.3× longer than wide; XI somewhat wider than VII, 3× longer than wide. Hypomeron with distinct stria. Pronotal punctation very fine and sparse. Scutellum completely covered by pronotal lobe. Elytral punctation similar to pronotal near base, apically denser and coarser, on apical third many punctures not well delimited, relatively large, as large or larger than intervals between them; parasutural stria very shallow and long. Mesepisternum, mesepimeron, lateral portion of metasternum and abdominal segments microsculptured. Punctation on lateral portion of metasternum, 1st visible ventrite and pygidium sparse and very fine, coarser than that on pronotum. Median portion of metasternum lacking impression or stria, flattened, punctation very dense, anteriorly rather fine, on apical half coarse.



Figs 158 to 162.

158. *Scaphobaeocera valida* sp. n., holotype, internal sac; 159 and 160. *Scaphobaeocera burckhardti* sp. n., holotype, aedeagus; 161 and 162. *Scaphobaeocera robustula* sp. n., aedeagus (161) and internal sac (162). Scale = 0.1 mm (158-161), 0.05 mm (162).

Metepisternum flat, not narrowed anteriorly, 0.05-0.06 mm wide; inner suture concave. Tibia I straight, II and III curved.

Sexual characters of male. Segments 1-3 of protarsi strongly enlarged, somewhat narrower than apex of tibia. Aedeagus (Figs 156 to 158) 0.43 mm long.

This species may be separated from other members of the genus having hypomeral stria by the combination of the following characters: body reddish brown, relatively large;

antenna with segments V to VII evenly long, XI about 1.3 × longer than X; metasternum coarser punctate than pronotum; metepisternum narrow; meso- and metatibia curved; parameres of aedeagus moderately enlarged apically, not lobed; internal sac as figured.

Scaphobaeocera burckhardti sp. n.

Holotype ♂: Chanthaburi, Khao Sabap Nat. Park, forest above Phliu Waterfalls, 150-300 m, 23-24.XI.85 (MHNG).

Paratypes: 2 ♂ as holotype (MHNG).

Length 1.40-1.45 mm, dorsoventral diameter 0.73-0.75 mm, elytra combined 0.67-0.72 mm wide. Body rather pale, ochreous. Apical abdominal segments, legs and antennae almost yellowish. Pronotum almost indistinctly, elytra distinctly iridescent. Antennae moderately long, relative length of segments: III 8, IV 15, V 17, VI 17, VII 17, VIII 12, IX 18, X 18, XI 24 (holotype); segment III more than 2 × longer than wide, about as wide as V or VI; IV somewhat slender than III, 5 × longer than wide; V and VI each about 5 × longer than wide; VII much wider than VI, 2.5 × longer than wide; VIII about 2.5 × longer than wide, slender than VII, wider than VI; XI wider than VII, 3 × longer than wide. Pronotal punctation very fine, barely visible at 50 × magnification, pronotal microsculpture indistinct at 100 ×. Scutellum not visible. Hypomeron with a distinct longitudinal stria. Elytra as in *valida,* but punctation near base coarser than that on pronotum. Mesepisternum, mesepimeron, lateral portion of metasternum and abdominal segments with distinct microsculpture. Punctation on lateral portion of metasternum and on 1st ventrite about as fine as that on pronotum. Median portion of metasternum lacking impression or stria; punctation very dense and fine except on small smooth area on anterior half. Metepisternum 0.02-0.04 mm wide, not narrowed anteriorly; inner suture straight. Pro- and mesotibiae straight. Metatibiae straight in basal fourth or third then narrowed and curved, becoming gradually stouter from middle to apex.

Sexual characters of male. Segments 1-3 of protarsi strongly enlarged, wider than apex of tibia. Aedeagus (Figs 159-160) 0.31-0.34 mm long.

S. burckhardti is characterized by the shape of the ventrally lobed parameres in combination with the shape of the spiral flagellum.

Scaphobaeocera robustula sp. n.

Holotype ♂: Chiang Mai, Doi Suthep, north slope, 1450 m, 4.XI.85 (MHNG).

Paratype ♂: Doi Suthep, 850 m, 31.I.87 (Schwendinger) (MHNG).

Length 1.6 mm, dorsoventral diameter 0.92 mm, elytra combined 0.92 mm wide. In most external characters similar to *valida,* microsculpture finer, on pronotum and on sternal parts of thorax barely visible at 100 × magnification. Pronotum weekly, elytra distinctly iridescent. Relative length of antennal segments in holotype: III 9, IV 15, V 17, VI 17, VII 21, VIII 12, IX 21, X 21, XI 24; segments IV-VI and XI shorter, VIII longer than in *valida,* 2 × longer than wide, XI less than 3 × longer than wide. Elytral punctation finer than in *valida,* only on apical third distinctly denser and coarser than on pronotum. Metepisternum very narrow, barely 0.02 mm large, inner suture concave. Punctation on metasternum and abdomen finer than in *valida,* basal punctures of 1st ventrite fine, not elongate. Pro- and mesotibiae stright, metatibiae curved.

Sexual characters of male. Segments 1-3 of the protarsi strongly enlarged. Aedeagus (Figs 161 and 162) 0.36-0.39 mm long.

Toxidium LeConte

This genus is not well defined. The Old World species placed in *Toxidium* belong to several groups which possibly deserve genus rank (Löbl 1984*a*). Four of the five Thai species are members of the Asian *aberrans* group. The fifth species shares with them most of the significant characters but have the elytron with complete sutural stria. The species may be separated by the following key:

1 Sutural stria of elytron incomplete, not joint with basal stria, or basal stria absent 2
— Sutural stria complete, curved along base and extended (basal stria) along basal margin, joint there with lateral stria .... species indet.
2 Sutural stria very short, developed only in apical portion of elytron. Larger species, at least 2.3 mm long 3
— Sutural stria long, extended from apex almost to base of elytron. Smaller species, not longer than 2.1 mm .... *styligerum*
3 Elytron with distinct basal stria 4
— Basal stria of elytron absent .... *incompletum*
4 Mesosternum smooth laterally of median keel. Mesocoxal area shorter than half of interval between its margin and apical margin of metasternum .... *robustum*
— Mesosternum ridgy. Mesocoxal area as long as or longer than half of interval between its margin and apical margin of metasternum .... *pubistylis*

Toxidium robustum Pic

Toxidium robustum Pic, 1930: 58.
Toxidium robustum; Löbl 1984*a*: 97.

Material examined: 1, labelled "WTak" and 1, "NTak" (Sedlacek) (MHNG).

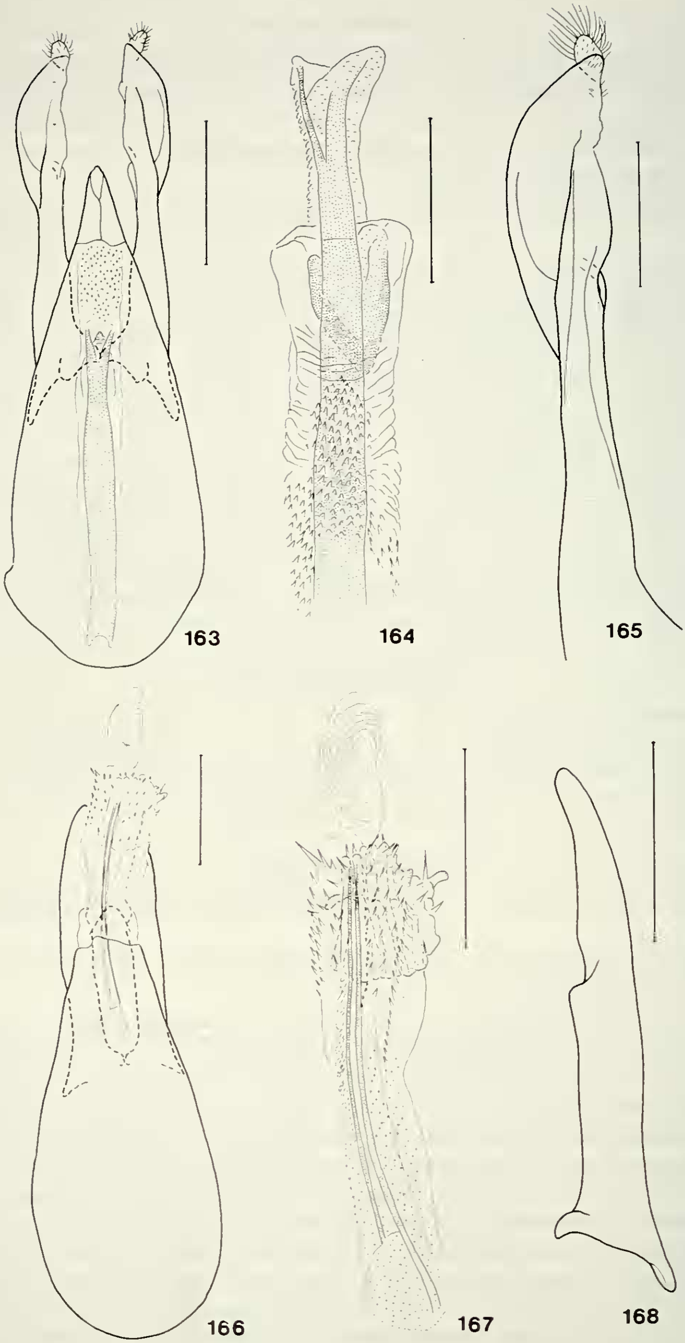
Distribution: Burma, Thailand. — New to Thailand.

Toxidium pubistylis sp. n.

Holotype ♂: Khao Yai Nat. Park, forest east of Heo Suwat Watterfalls, 800-900 m, 1.XII.85 (MHNG).

Paratype ♂: Chiang Mai, ravine near road to Wab Pang An, 50 km NE Chiang Mai (via Chiang Rai), 900 m, 3.XI.85 (MHNG).

Length 2.40-2.45 mm. Body dark reddish brown. Apical segments of abdomen, femora and tibiae somewhat paler, antennae and tarsi much paler. Antennae long, relative length of segments: III 24, IV 28, V 31, VI 26, VII 29, VIII 23, IX 28, X 28, XI 32 (holotype). Segment VII 3.5 × longer than wide, VIII 4 × longer than wide, XI 3 × longer than wide. Punctation on pronotum dense and very fine, barely visible at 50 ×. Point of scutellum exposed. Elytra combined 1.38-1.41 mm wide; sutural stria short, shallow, extended from apex to middle third of elytron; basal stria shallow, not joint with lateral stria; lateral and epipleural striae parallel together in basal half of elytron; discal punctation irregular, consisting of more or less fine punctures, some coarser ones form irregular longitudinal rows on basal half of elytron. Wings fully developed. Mesosternum ridgy, with a long, well developed and sharply delimited median keel. Remaining ventral surface of thorax very finely punctate and apparently not microsculptured. Median portion of metasternum somewhat convex, with two apical impressions. Mesocoxal areas 0.09-0.10 mm long, as long as or barely longer than half of smallest interval between them



Figs 163 to 168.

163. *Toxidium pubistylis* sp. n., holotype, aedeagus, 164. dtto, paratype, internal sac; 165. dtto, holotype, paramere; 166. *Toxidium styligerum* sp. n., holotype, aedeagus, 167. dtto, internal sac; 168. dtto, paramere. Scale = 0.2 mm (163) and 0.1 mm (164-168).

and apical margin of metasternum. Metepisternum convex, 0.12 mm wide, with deep and wide internal suture which is rounded anteriorly. First ventrite lacking microsculpture except for that on its apical margin; following ventrites and visible tergites with very fine microsculpture consisting of punctures. Tibiae straight.

Sexual characters of male. Segment 1 of protarsi distinctly enlarged, segments 2 and 3 barely enlarged. Aedeagus (Figs 163 to 165) 0.85-0.87 mm long.

Remarks. Unlike other species of *Toxidium, pubistylis* is characterized by a pubescent lobe on the apex of the parameres of the aedeagus. This species would run in my key (Löbl 1984*a*) to *diffidens* from which it may be separated by the darker body, the more irregular elytral punctation, the ridged mesosternum, and medio-apical impressions on the metasternum.

Toxidium styligerum sp. n.

Holotype ♂: Chiang Mai, Soi Suthep, forest at summit, 1600 m, 4.XI.85 (MHNG).

Paratypes: 1 ♀ as holotype; 1 ♀, Chiang Mai, Doi Inthanon, 1250 m, near Forestry Department, 6.XI.85 (MHNG).

Length 1.85-2.05 mm. Body dark brown, more or less reddish, elytra apically paler, apical segments of abdomen and legs paler reddish brown to yellowish. Antennae moderately long, segments I to VI almost yellowish, following segments pale brown. Relative length of antennal segments: III 19, IV 19, V 25, VI 23, VII 24, VIII 17, IX 22, X 22, XI 30 (holotype). Segment VII somewhat more than 4× longer than wide, VIII and XI about 4× longer than wide. Punctation on pronotum moderately dense and very fine, barely visible at magnification 24×. Point of scutellum exposed. Elytra combined 1.0-1.15 mm wide; sutural stria rather shallow, relatively long, extended from apex to basal third or basal fourth of elytron; basal stria shallow, joint to lateral stria; lateral and epipleural striae parallel together in basal half of elytron; punctation very fine near base and on apical portion, elsewhere rather coarse, dense and relatively regular. Wings fully developed. Mesosternum with rather coarse punctures at lateral margins, elsewhere smooth; mesosternal median keel low and not well delimited. Punctation on ventral side of body sparse and very fine, except for coarser punctures on margines of mesosternum, mesocoxal area and base of 1st ventrite. Metasternum apparently without microsculpture, its median portion convex, flattened just in front of apical process. Mesocoxal areas 0.07-0.10 mm long, longer than half of smallest interval between them and apical margin of metasternum. Metepisternum flat, 0.08-0.10 mm wide, with deep, rather wide and almost straight inner suture. Abdomen as in *pubistylis.* Protibiae somewhat curved, meso- and metatibiae straight.

Sexual characters of male. Segments 1 and 2 of protarsi distinctly, segment 3 baryle enlarged. Aedeagus (Figs 166 to 168) 0.49 mm long.

T. styligerum resembles *curtilineatum* Champion by the elytron with relatively long sutural stria and by apically narrowed parameres of the aedeagus. It can be easily distinguished from the latter by its smaller size, finer punctate apical portion of elytra and by the internal sac of the aedeagus as figured.

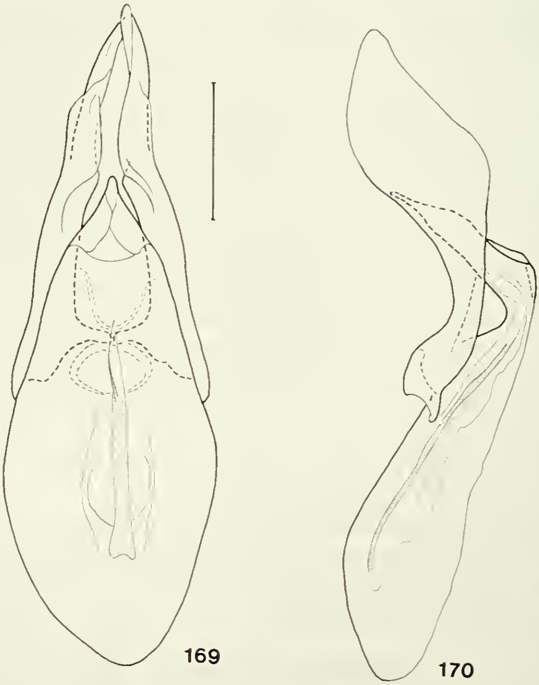
Toxidium incompletum sp. n.

Holotype ♂: Chiang Mai, Chiang Dao, 450 m, 5.-11.IV.58, in a dead tree (Maa) (BMH).
Paratype ♀: as holotype (MHNG).

Length 2.40 mm. Body black, femora and tibia reddish brown, tarsi, antennae and apical segments of abdomen pale reddish brown to yellowish. Antennae long, relative length of segments: III 25, IV 27, V 29, VI 23, VII 28, VIII 18, IX 27, X 25, XI 32; segment VII about 2.5×, VIII 3×, XI somewhat more than 2× longer than wide. Pronotal punctation rather dense and very fine, distinct at magnification 24×. Point of scutellum exposed. Elytra combined 1.38-1.45 mm wide; sutural stria shallow and short, distinct only along apical fourth of sutural margin; basal stria not developed; lateral and epipleural striae as in *styligerum;* punctation rather fine, specially near the base, with some irregularly disposed coarser punctures. Mesosternum finely punctate, median keel barely developed. Punctation on ventral side of body as in *styligerum.* Metasternum lacking microsculpture, with median portion flattened. Mesocoxal areas 0.05-0.06 mm long, about as long as 1/3 of smallest interval between them and apical margin of metasternum. Metepisternum convex, 0.08 mm wide, moderately narrowed anteriorly, with inner suture deep, punctured, somewhat concave. Abdominal microsculpture as in *pubistylis* and *styligerum.* Tibiae straight.

Male. Segments 1 and 2 of protarsi moderately enlarged, segment 3 barely enlarged. Aedeagus (Figs 169 and 170) 1.0 mm long.

T. incompletum shares with other species of the *aberrans* group (*aberrans* Achard, *curtilineatum* Champion, *robustum* Pic, *vagans* Löbl, *diffidens* Löbl, *pubistylis* sp. n., *styligerum* sp. n.) all diagnostic significant characters but the basal stria of the elytron. It may be readily distinguished from other species also by conspicuously dilated apical part of the parameres.



Figs 169 and 170.

Toxidium incompletum sp. n., holotype, aedeagus. Scale = 0.2 mm.

Toxidium species

Material examined: 2♀, Khao Yai Nat. Park, forest near Headquarters, 750-850 m, 26.XI.-3.XII.85; 1, Phuket, hills near Surin Beach, 1.-6.XI.87 (Heiss) (MHNG).

Remarks. This is a conspicuous species which resembles *pygmeum* Löbl and *montanum* Löbl from Sri Lanka by the complete sutural stria of the elytron. It differs from the latter two species by much larger size, unicolorous dark reddish brown pronotum and elytra, longer antennae, and deeper sutural/basal stria of the elytron.

Scaphoxium Löbl

The genus is well defined by the apically lobed hypomeral part of prothorax and curved 3rd antennomere (autapomorphies). As in *Scaphicoma* it lacks visible mesepimera, the meso- and metacoxae are approximate and the aedeagus is slender and bears parameres abruptly narrowed in apical portion. *Scaphoxium* may be separated from the latter also by much shorter antennae and tarsi, and by antennal insertion lying rather close to the clypeal margin. Twenty four species are included in the genus, most of which distributed over tropical Asia. One occurs in Japan, and a few in Melanesia and North Queensland. Furthermore, several unidentified Afrotropical species are represented in the collection of MHNG. Among the Thai collections, 5 species were identified, one of them is new.

Key to the Thai species of ***Scaphoxium***

1 Metasternum medially impressed 2
— Median portion of metasternum not impressed 3
2 Apophyse of paramere of aedeagus slender and curved, overlapping a small membranous lobe. Internal sac with conspicuous row of spiculi. Antennomere IV not shorter than III. Larger species, 1.4-1.6 mm long .... *sparsum*
— Parameral apophyse short and wide, touth-like. Internal sac very finely and densely spinous, with an U-shaped sclerit in middle. Antennomere IV usually distinctly shorter than III. Smaller species, 1.2-1.4 mm long......... *intermedium*
3 Internal sac of aedeagus with weakly sclerotized elongate vesica .... *singlanum*
— Internal sac of aedeagus with strongly sclerotized pieces 4
4 Apical pair of sclerites of internal sac hook-like, not enlarged, central sclerit not developed. Lateral portion of 1st ventrite sometimes distinctly microsculptured .... *taiwanum*
— Internal sac with two pairs of elongate sclerites and one short central sclerite, elongate apical sclerites enlarged distally. Lateral portion of 1st ventrite without microsculpture .... *avidum* sp. n.

Scaphoxium singlanum Löbl

Scaphoxium singlanum Löbl, 1984*a*: 101.

Material examined: 2, Chiang Mai, Doi Suthep, 1450 m, 4.XI.85; 2, Doi Suthep, 1100 and 1120 m, I.86, pit-fall trap (Schwendinger); 1, Doi Inthanon, ravine near Forestry Department, 1250 m, 6.XI.85; 1, Doi Inthanon, 1720 m, 7.XI.85; 2, Doi Inthanon, 1020 m, 17.II.87 (Schwendinger) (all MHNG).

Distribution: India, Thailand. — New to Thailand.

Remarks. These specimens are larger than the Indian ones (Thai specimens: length 1.35-1.45 mm, dorso-ventral diameter 0.72-0.87 mm, maximum width 0.70-0.73 mm), and their aedeagi are longer (0.55-0.60 mm). All other diagnostic features including the peculiar shape of the internal sac are the same as in the type-series from Singla, Darjeeling district.

Scaphoxium intermedium Löbl

Scaphoxium intermedium Löbl, 1984*a*: 101.
Scaphoxium intermedium; Löbl 1986*c*: 350.

Material examined: 1, Chiang Mai, below Mae Nang Kaeo, 54 km NE Chiang Mai (via Chiang Rai), 900 m, 3.XI.85; 1, Doi Inthanon, 1020 m, 17.II.87 (Schwendinger); 21, Mae Hong Son, Tham Lok Forest Park, 8 km E Sop Pong, 700 m, 11. and 13.XI.85 (all MHNG).

Distribution: India, Thailand. — New to Thailand.

Scaphoxium taiwanum Löbl

Scaphoxium taiwanum Löbl, 1890: 121.
Scaphoxium? taiwanum; Löbl 1986*c*: 351.

Material examined: 1, Chiang Mai, Mae Nang Kaeo, 54 km NE Chiang Mai (via Chiang Rai), 950 m, 3.XI.85 (MHNG).

Distribution: India, Thailand, Taiwan. — New to Thailand.

Remarks. The aedeagus of the Thai specimen is as large as that in the holotype (from Taiwan) while the apical sclerites of the internal sac are slender, as in the two males from India (Löbl 1986*c*).

Scaphoxium sparsum Löbl

Scaphoxium sparsum Löbl, 1979*a*: 121.
Scaphoxium sparsum; Löbl 1984*a*: 100.

Material examined: 1, Phuket, hills near Surin Beach, 1.-6.XI.87 (Heiss) (MHNG).

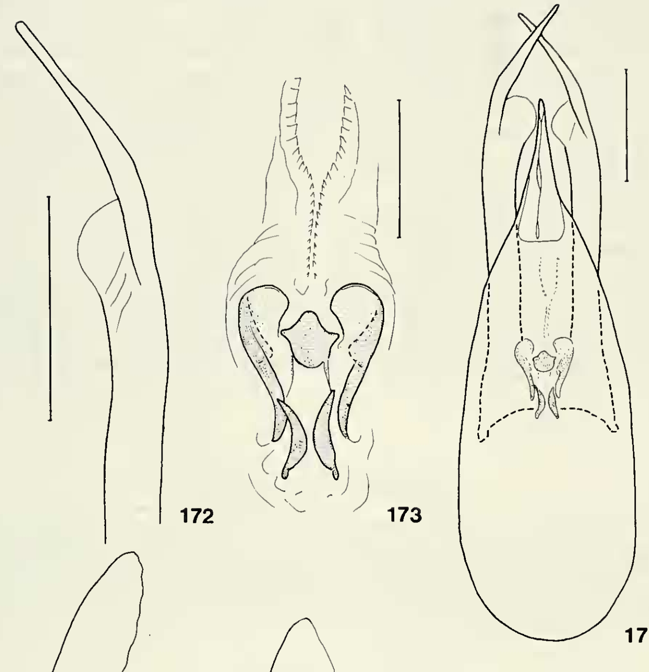
Distribution: India, Thailand. — New to Thailand.

Scaphoxium avidum sp. n.

Holotype ♂: Chiang Mai, ravine near road to Wab Pang An, 50 km NE Chiang Mai (via Chiang Rai), 900 m, 3.XI.85 (MHNG).

Paratypes: 1♂, Chiang Mai, Doi Inthanon, ravine near Forestry Department, 1250 m, 6.XI.85; 2♂, 1♀, Phuket, hills near Surin Beach, 1.-6.XI.87 (Heiss) (all MHNG).

Length 1.5-1.6 mm, dorsoventral diameter 0.80-0.87 mm, pronotum at base 0.67-0.74 mm wide, elytra combined 0.73-0.79 mm wide. Body reddish brown to blackish, pronotum somewhat less dark than elytra, apical abdominal segments, femora and tibiae reddish brown, tarsi and antennae yellowish. Relative length of antennal segments: III 12, IV 12, V 14, VI 14, VII 19, VIII 14, IX 17, X 16, XI 22 (holotype). Segments VII, VIII and XI each about 3 × longer than wide. Punctation on pronotum very fine, barely visible at magnification 24 × . Scutellum completely covered by pronotal lobe. Elytral base about as finely punctate as pronotum, middle portion of elytron decidedly coarser punctate than base, with puncture visible at magnification 12 × , apical area of elytron still somewhat



Figs 171 to 176.

171. *Scaphoxium avidum* sp. n., holotype, aedeagus; 172. dtto, apical half of paramere; 173 dtto, internal sac; 174. *Bironium distinctum* (Achard) from Doi Pui, paramere; 175. *Bironium troglophilum* sp. n., holotype, paramere; 176. *Bironium bidens* sp. n., paratype from Doi Suthep, paramere. Scale = 0.1 mm (171, 173), 0.05 mm (173), 0.2 mm (174-176).

coarser and also denser punctate than central area. Sutural stria of elytron evanescent 0.15-0.10 mm behind level of pronotal lobe. Median impression of mesosternum very shallow, with a very fine elongate ridge in apical half. Median portion of metasternum somewhat convex anteriorly, flattened apically, extremely finely punctate near apical margin. Lateral portion of metasternum with several distinct punctures. Mesocoxal area 0.05-0.07 mm long, shorter than interval between its margin and metacoxa, with marginal punctures distinct. Metepisternum flat, 0.05-0.07 mm wide; inner suture wide, concave. Abdomen microsculptured as in *singlanum*. Basal punctures on 1st ventrite distinct. Metatibiae 0.39-0.44 mm long.

Sexual characters of male. Segments 1 to 3 of protarsi enlarged. Apical margin of 5th ventrite emarginate. Aedeagus (Figs 171 to 173) 0.54-0.59 mm long.

Remarks. Unlike in other species of the genus the basal portion of the internal sac in *avidum* is provided with two pairs of short sclerites joined to a small central sclerit. By this feature *avidum* may be readily distinguished from other species including those having similarly lobed parameres, and lacking median metasternal impression.

Scaphicoma Motschulsky

This genus includes 12 species occuring in tropical Africa, Asia and Melanesia. *Scaphicoma* is characterized by approximate meso- and metacoxae, antennal insertion situated fairly distant above clypeal suture, basal pronotal angles rounded and not protruding, reduced mesepimera, very long and slender antennomeres III to XI, and very long tarsi.

Scaphicoma arcuatum (Champion)

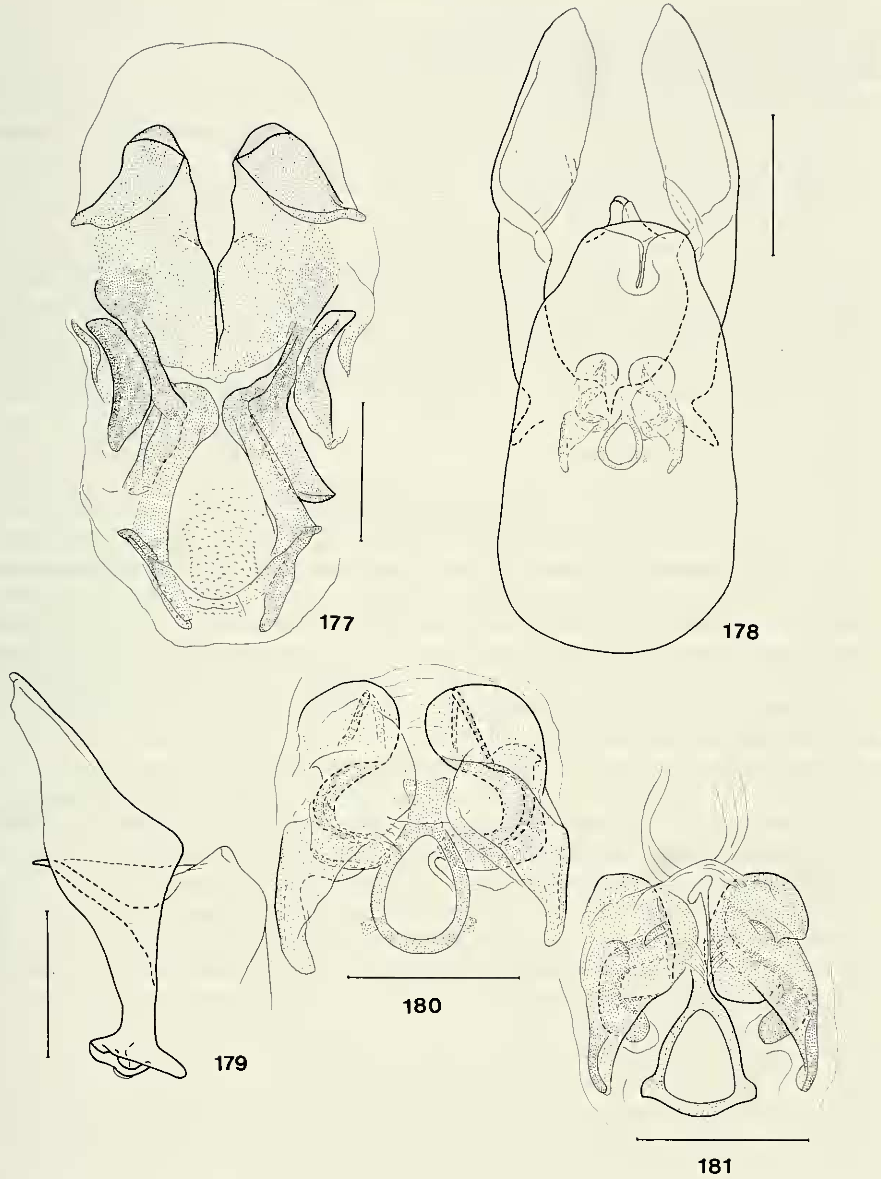
Toxidium arcuatum Champion, 1927: 272.
Scaphicoma arcuatum; Löbl 1984*a*: 105.

Material examined: 1, Chiang Mai, road to Wab Pang An, 50 km NE Chiang Mai (via Chiang Rai), 900 m, 3.XI.85; 1, Mae Nang Kaeo, 54 km NE Chiang Mai, 900 m, 3.XI.85; 1, Doi Pui, 1250 m, 14.III.82 (Rougemont); 2, Khao Yai Nat. Park, forest east of Heo Suwat Waterfalls, 800-900 m, 1.XII.85; 2, Khao Yai. Nat. Park, near Headquarters, 750-850 m, 26.XI.-3.XXII.85; 1, labelled "Thai W. Tak V. 55" (Sedlacek); 2, Phuket, hills near Surin Beach, 1.-6.XI.87 (Heiss) (all MHNG).

Distribution: North India, Burma (1, Taunggi, 6.IV.80 (Rougemont)), Thailand. — New to Thailand and to Burma.

Bironium Csiki

Bironium may be readily distinguished by the very long legs and antennae, and by the antennal insertion situated at upper margin of eye, the rounded basal angles of pronotum, the not visible mesepimera, and the large median portion of metasternum. So far 23 valid species are recognized, all confined to Asia and New Guinea. Four species were found in Thailand, two of which are new and described below.



FIGS 177 to 181.

177. *Bironium distinctum* (Achard) from Doi Pui, internal sac; 178. *Bironium troglophilum* sp. n., holotype, aedeagus; 179. dtto, distal portion of median lobe with paramere, lateral view; 180. dtto, internal sac; 181. *Bironium bidens* sp. n., paratype from Doi Suthep, internal sac. Scale = 0.1 mm (177, 180, 181), 0.2 mm (178, 179).

Bironium distinctum (Achard)

Heteroscapha distinctum Achard, 1920*f*: 265.
Heteroscapha distinctum; Pic 1920*c*: 24; 1921*a*: 163.
Heteroscapha distincta; Champion 1927: 272.
Bironium distinctum; Löbl 1984*a*: 106.

Material examined: 2, Chiang Mai, Doi Pui, 1250 m, 14.III.82 (Rougemont); 2, Doi Suthep, III.87 (Rougemont) (all MHNG).

Distribution: Burma, Thailand.

The species is defined by the combination of following characters:

Length 2.20-2.45 mm. Body very dark reddish brown to blackish, without any paler spots. Elytron with 3 rows of coarse punctures: 1st and 2nd starting at same level near base, 3rd row starting behind a small humeral hump. Inner (1st) row short, extended somewhat behind level of middle of elytron, lying in a shallowly impressed line; 2nd and 3rd row lying in grooves, almost evenly long, extended at least to apical fifth of elytron. Interval between sutural margin and sutural stria vaulted. Interval between sutural stria and 1st row irregularly, more or less distinctly (sometimes coarsely) punctate. Intervals between 1st and 2nd row and between 2nd and 3rd row vaulted, very finely punctate. Interval between 3rd row and lateral stria coarsely and very densely punctate in basal half, further on very finely punctate. Mesosternum impunctate, not ridgy, median keel distinct. Median portion of metasternum impressed, with a few coarse punctures; anterior margin of mesocoxal process with several elongate punctures, not ridgy. Punctation on lateral portion of metasternum coarse and dense, consisting of large and round, not confluent punctures. Metepisternal suture sparsely punctate. In male segments 1 to 3 of protarsi moderately enlarged, with short pubescence, 6th visible ventrite lacking any particular sexual characters. Parameres of aedeagus enlarged (in dorsal view) postbasally and apically (Fig. 174); internal sac containing a complex armature more or less sclerotized, lacking a proximal ring (Fig. 177).

Remarks. *B. coomani* (Pic) from Vietnam shares most of these characters but is somewhat larger and decidedly paler than the specimens of *distinctum* I have seen so far. Unfortunately, the single type specimen of *coomani* deposited in MHNP is a female (bearing original labels handwritten by Pic "Hoa Binh" and "*Coomani* n. sp."), and no other specimen is available which could be associated with *coomani*.

Besides *distinctum* and *coomani* following unicolorous species have elytra with distinct rows of coarse punctures: *feai* (Achard) from Burma and Thailand, *tonkineum* (Pic) from Vietnam, *trisulcatum* (Heller), *bisulcatum* Löbl and *rufescens* Löbl from the Philippines, *borneense* Löbl from Sabah, and two new species described below. The Sabah and Philippine species may be easily separated by their smaller size, *trisulcatum* also by not keeled, smooth mesosternum. *B. feai* and *tonkineum* are larger than *distinctum* (length 3.2-3.4 mm) and differ conspicuously in having two rows of coarse punctures lying in deep grooves starting fairly far behind the elytral base which is just as densely and coarsely punctate as most of the remaining elytral surface.

Bironium troglophilum sp. n.

Holotype ♂: Mae Hong Son, Sop Pong, Tham "Plaa", 28.VII.85 (Besson) (MHNG).

Paratypes: 4♂, 2♀, as holotype; 1♂, 1♀, Mae Hong Son, Sop Pong, Tham "Pi", 22.VII.85 (Leclerc) (MHNG); 1♀, Chiang Mai, Chiang Dao, cave (Sedlacek) (MHNG).

Length 2.25-2.45 mm. Body, femora and tibiae reddish brown, tarsi and antennae paler, almost yellowish. In general appearance similar to *distinctum* from which it differs by following characters: Elytron with inner (1st) row of punctures irregular. Coarse punctation on laterobasal portion of elytron less dense. Mesocoxal process of metasternum finely striate at anterior margin. Lateral portion of metasternum smooth near apical margin and on a small area at latero-anterior angle, its remaining surface with coarse and dense punctation formed by somewhat elongate and partly confluent punctures. Suture of metepisternum impunctate.

Sexual characters of male. Segments 1 to 3 of protarsi as in distinctum, 6th ventrite with simply pointed elongate median touth about 0.02 mm high. Aedeagus (figs 175, 178-180) 0.88-0.90 mm long, with parameres slender near base and internal sac provided with a ring-like proximal sclerit.

Remarks. According to J. P. Besson (pers. comm.), hunderts of *Bironium* where observed on the walls of the cave Tham "Plaa". Surprisingly, when collecting around Sop Pong, no specimens of this species where found but 7 specimens of *bidens*. *B. troglophilum* has fully developed wings and does not exhibit any morphological character showing cave adaptation.

Bironium bidens sp. n.

Holotype ♂: Chiang Mai, Doi Suthep, 1400 m, northern slope, 5.XI.85 (MHNG).

Paratypes: 2♀, Chiang Mai, as holotype; 1♂, 2♀, Doi Suthep, 1450 and 1550 m, 4.XI.85; 1♂, Doi Suthep, 1050 m, 5.XI.85; 4♂, 1♀, Doi Pui, about 1500 m, 19.XII.88 (Trautner & Geigenmüller); 1♂, 1♀, Doi Inthanon, 1250 m, ravine near Forestry Department, 6.XI.85; 1♂, 1♀, Doi Inthanon, 1020 m, 17.II.87 (Schwendinger); 4♂, 5♀, ravine below Mae Nang Kaeo, 54 km NE Chiang Mai (via Chiang Rai), 900 m, 3.XI.85; 5♂, 2♀, Mae Hong Son, Sop Pong, Tham Lok Forest Park, 700 m, 11. 6 13.XI.85 (MHNG, SMNS).

Length 2.05-2.25 mm. Body dark reddish brown, femora and tibiae paler reddish, tarsi and antennae almost yellowish. In external characters very similar to the previous species from which it differs in sexuals characters.

Male. Segments 1-3 of protarsi slightly enlarged, 6th visible ventrite with a rather large median touth-like protuberance which is about 0.05 mm high and emarginate medially (bidentate in caudal view). Aedeagus (figs 176, 181) 0.83-0.85 mm long. Internal sac almost as in *troglophilum* but parameres notably wider behind their base and each with a tiny but distinct lobe on the enlarged apical portion.

Remarks. All specimens were found in moist forest litter.

Bironium feai (Achard)

Heteroscapha feai Achard, 1914: 195; 1920*b*: 135.

Material examined: 2, Chiang Mai, Doi Suthep, 1270 m, 5.XI.85; 5, Doi Suthep, 1180 m, 11.IV.86 (Schwendinger); 4, Doi Pui, 1250 m, 14.III.82 (Rougemont); 2, "W. Tak" (Sedlacek) (all MHNG).

Distribution: Burma, Thailand. — New to Thailand.

Remarks. *B. feai* differs conspicuously from all known members of the genus but *tonkineum* (see discussion below *distinctum*). The sole available specimen of *tonkineum* is a female type preserved in MHNP. It differs from *feai* in having almost smooth medio-apical part of the mesosternum (while the latter is ridged in *feai*).

Sapitia Achard

Sapitia species live on fungus gardens in termite nest but occasionally are found in light, malaise, or pit-fall traps. The genus is confined to Asia and includes three species. It differs conspicuously from other Thai scaphidiids by dense pronotal and elytral pubescence. The two species collected in Thailand may be readily separated by iridescent elytra and smaller, less than 0.10 mm long postcoxal areas of the 1st ventrite in *versicolor* (Pic), and not iridescent elytra and larger, at least 0.15 mm long postcoxal areas in *lombokiana* Achard.

Sapitia lombokiana Achard

Sapitia lombokiana Achard, 1920*c*: 208.
Baeoceridium (Baeoceridiolum) sericeum Pic, 1922: 2.
Sapitia lombokiana; Löbl 1978: 55.

Material examined: 2, Khao Yai Nat. Park, Heo Suwat Waterfall area (ex fungus garden, Nest T-1070) (D. H. & A. C. Kistner) (FMNH, MHNG).

Distribution: Vietnam, Thailand, Indonesia (Lombok, Sumatra). — New to Thailand.

Sapitia versicolor (Pic)

Baeoceridium versicolor Pic, 1920*b*: 242.
Sapitia versicolor; Löbl 1978: 56.

Material examined: 1, Chiang Mai, Doi Suthep, 1180 m, I.87, pit-fall trap (Schwendinger); 2, Nakhon Nayok, Wang Takrai Park, 4.-7.IX.78, on light (Bremer) (MHNG).

Distribution: Malaysia (Sabah), Indonesia (Sumatra), Thailand. — New to Thailand.

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